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Most Common Misconceptions About Autosortation

By Chad Keith

Abstract

Based on the continuous need to lower operational costs and improve customer service, interest grows in the area of autosortation technology. However, many discussions with uniform rental operators have revealed a number of misconceptions about the costs, implementation, and operation of this technology. "The Most Common Misconceptions About Autosortation Technology" examines these misconceptions and identifies how new affordable and scalable solutions have changed the way industrial uniform rental operators can apply the technology to improve customer service and remain competitive.

Introduction

Independent uniform rental operators are facing new challenges everyday. As technology enhancements are introduced, it often becomes difficult to evaluate its applicability in a specific application. Such is the case for autosortation technology for the industrial laundry industry. Autosortation was initially targeted to larger operations requiring a sizable solution and a sizable investment. Based on the experience of designing and implementing these larger systems, the industry has learned to now design systems for much smaller operations without sacrificing reliability, flexibility and return on investment.

It is the position of the author that there exist a number of common misconceptions surrounding autosortation technology. These misconceptions are based on the initial introduction of the autosortation technology that targeted larger industrial laundries and offered very little opportunity for the average size operation. By designing solutions that are more flexible and scaleable, suppliers can now provide solutions for practically every uniform rental facility – independent of current size or future expansion requirements.

The following collection of the Most Common Misconceptions About Autosortation Technology is a result of many discussions with operators across the country. These misconceptions identify a kind of "information gap" that exists concerning the feasibility of applying autosortation technology to any size operation. This information gap also includes misconceptions of the many benefits that can be realized to help operators differentiate themselves and keep themselves competitive.

... an entry-level system can be purchased for as little as \$100,000.

Misconception 1

Autosortation systems typically cost \$1,000,000 or more and therefore only deliver value to large uniform rental plants processing at least 20,000 garments per day.

New modular technology offers scalable systems that can meet the requirements of any size facility for a much more manageable investment. With today's technology, an entry-level system that saves labor, offers primary sorting, final sorting, and produces useful management reports can be purchased for as little as \$100,000 for a laundry with daily sorting volume in the range of 2,000 - 6,000 garments. By including additional automation components, a startup system for a plant processing 6,000 -15,000 garments per day may be installed for as little as \$250,000.

Regardless of size, uniform rental operations that employ manual garment sortation face many of the same operating problems of human errors, employee absence and fatigue and high costs. Autosortation systems can now be scaled to any size operation in order to minimize these operating problems.

Misconception 2

The payback for an autosortation investment is more than five years.

Payback depends upon the dollar investment that is made in new equipment compared to the amount of savings realized from the investment. In the mid-1990s, the most viable option was a large system that could cost \$1,000,000 or more. Even by removing seven or eight operators from the sorting process, the payback was more than five years. Today there are many more options available that can greatly reduce the cost of an autosortation system and thereby reducing the payback period.

... such a system can have a payback of less than two years.

For example, there are entry-level semi-automatic autosortation systems that cost as little as \$100,000 that can be operated by two or three employees. These systems may be suitable for plants that have daily uniform volume of 2,000 to 6,000 garments. With the associated reduction of labor cost for the sorting process, such a system can have a payback of less than two years.

For larger plants, there have been other design advances that lower the initial investment and further improve payback. Such systems may utilize slick rails in some areas or dual-purpose sorters and conveyors to drive down the cost of investment. In some cases, by utilizing portions of an operator's existing manual sorting equipment, the startup cost may be recovered with a much quicker payback.

.... any plant utilizing space for a manual sorting process is a viable candidate for autosortation.

Some vendors offer a garment ID service so that operators no longer have to worry about it.

... the autosort employee deals only with very simple controls

Misconception 3

Autosortation systems are very large and require too much space to be installed in an operating facility.

Due to recent advances in modular autosortation technologies, any plant utilizing space for a manual garment sorting process is a very viable candidate for converting to an autosortation process. This has been brought about by adapting many of the technologies originally developed for larger and totally mechanized autosortation systems to most existing manual sorters. This is particularly applicable to slick rail primary sorting and storage. Manual primary sorters can be automated thus preserving the current space and installed cost of the existing equipment. In the same space that is being used for second and third break manual sorters, a final autosorter can be deployed.

These advancements now bring all of the power and advantages of autosortation to any operation, even those currently cramped for space.

Misconception 4

It is too costly and complicated to identify my garments with barcodes or RFID tags, and the resources just aren't available.

Garments must have barcodes or RFID tags in order to take advantage of autosortation. Although there is an initial investment, the subsequent and continuing operating cost reductions lead to an attractive payback.

The material cost of garment identification is small compared to the cost to install the identification and interference to production. Fortunately, autosortation suppliers today can offer solutions that minimize this problem. Some autosortation vendors even offer a garment ID service so that operators no longer have to worry about it.

Misconception 5

The operation of an autosortation system is too complicated for the average plant employee.

While autosortation systems depend on computerized processing, these systems are easier to operate than a manual sorting system. Autosortation systems eliminate all of the garment reading, monitoring, route and lot conversion, rail assignment, bundle assembly, and decision making actions that must occur by operators in the manual sorting process. The autosort employee

deals only with very simple controls.

Manual sort systems cause employee fatigue and repetitive stress. The typical autosortation employee never suffers from these problems, and is able to focus on their activities with a much higher level of job satisfaction. The results are increased levels of productivity and accuracy which quickly translate to higher degrees of quality and satisfaction for everyone.

Misconception 6

The maintenance of an autosort system is too sophisticated for existing employees.

The mechanical portions of systems are even easier to maintain.

The reality is that uniform rental operators began making the switch to computerized equipment over two decades ago. Since then, almost all plant equipment systems have utilized advanced control systems and computers for their day-to-day operation, and the reliability of these systems has never been greater. Autosortation systems employ the same types of control systems and computer systems that are used in all areas of the typical uniform rental operation, and they are maintained in the same manner as other automated equipment - like presses, washers, dryers and soiled sling handling systems.

The mechanical portions of autosortation systems are even easier to maintain than these other pieces of machinery since they do not have to be designed to handle very heavy single point stress loadings. They employ very long life and low friction conveyor transport components that are very familiar to the typical maintenance engineer.

The greatest degree of technology is actually found in the control software, which has been proven to be robust and extremely reliable when supplied by a reputable supplier. If technical issues do arise, the system manufacturer can provide immediate online support via an internet connection with the plant. A quality system manufacturer also typically offers training and service to ensure that system performance continues to meet the needs of an operator.

Misconception 7

Labor reduction is the only benefit of autosortation.

A reduction in labor hours is an obvious and significant benefit of implementing autosortation, but many additional benefits – both tangible and intangible – will be realized.

Surveys suggest that circulating inventory can be reduced by up to 20% or more.

In addition to labor reduction, inventory reduction is another tangible benefit. Informal surveys suggest that circulating inventory can be reduced by up to 20% or more. This reduction comes from the elimination of over-issues: garments that have been reported lost but are still in the system. Reports from autosortation systems are available that provide the operator with documentation that a customer's requirements are being met.

Intangible benefits include:

- (1) Improved garment handling including storage with proper spacing.
- (2) Improved customer satisfaction because of improved sort accuracy.
- (3) Improved customer service because of the availability of garment sort history.
- (4) Enhanced operator image by being innovative and forward-thinking.
- (5) Improved profitability for to detailed customer/wearer accounting.

All of these benefits will provide a competitive advantage for the uniform rental operator.

Misconception 8

Adding capacity to autosortation systems is difficult and expensive.

Systems exist that are affordable, expandable and deliver a favorable payback.

One of the best recent developments in autosortation is the ability to purchase a system that is sized right for today's needs and can be easily expanded to accommodate growth in garment processing. The availability of the latest modular systems allows operators to begin with much smaller and more affordable systems that provide an attractive payback. Such systems can significantly lower the initial investment by utilizing slick rails and/or powered storage rails that are already in use by the operator. However, starting smaller makes it important that the system is readily expandable without a great deal of difficulty or unreasonable expense. Systems now exist that are affordable, expandable and that deliver a favorable payback.

Misconception 9

Autosortation requires wash lot processing.

Decisions are made by

There are differences in the way various autosortation suppliers develop their systems. Some suppliers utilize systems that require a wash lot process. Other suppliers utilize technology without this limitation allowing garments to be entered into the sort process at

controls, which adapt to the processes.

Mother-hooks have been eliminated with no loose pieces

ABOUT THE AUTHOR

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any time before the final sort. The latter systems are able to handle either wash lots or day lots, so there is never a need to change an operator's wash process. All sorting decisions are made by the software and controls, which are able to adapt to the varied processes implemented in industrial garment rental facilities.

Misconception 10

Mother-hooks, or carriers, are essential to accurately sort garments and eliminate loose pieces.

While this may have been true in the early implementation stages of autosortation technology, it is not true now. Technology in autosortation has improved dramatically to the point where mother-hooks have been eliminated with the assurance that there will be no loose pieces. Similarly, RFID also makes mother-hooks unnecessary for any sort system that can use this technology.

Mr. Keith has over twenty-six years of professional, technical and managerial experience in operating two successful companies: Keith Associates, Inc., incorporated in 1976; and Softrol Systems, Inc. which was incorporated in 1987. Softrol Systems is a technology company that attacks and solves the many wet processing, process control and automation problems found in traditional wet process industries such as the textile manufacturing and textile rental industries.

Mr. Keith's education includes a B.S. in Chemistry from the University of Georgia, an Associate degree in Engineering from Kennesaw State, U.S. Navy electronic school certifications, and an electronics degree from DeVry Institute.

Memberships:

- UTSA – Uniform Textile Services Association
- AATCC – American Association of Textile Chemists and Colorists
- ACS – American Chemical Society
- AIC – American Institute of Chemists