

2024

WEIGHT-BASED INVENTORY MANAGEMENT SYSTEM COMPARISON

COMPARING 2 LEADING SYSTEMS
WITH THE WEIGHT-BINS
TECHNOLOGY

Weight-based inventory management system comparison

Background

Managing medical supplies in healthcare is challenging due to the fast-moving nature of items and unpredictable demand, or alternatively, shelves loaded with items that have not "moved" for a long time. Without accurate monitoring, stock-outs, shortages, and surpluses occur, draining staff time and affecting patient care. Inefficient supply management leads to costly errors, with nurses and logistics staff spending valuable time on manual tasks.

To address these challenges, healthcare providers are increasingly turning to "white glove" solutions that fully automate inventory management, reducing reliance on human intervention. In today's eco-system, a weight-based inventory management system is the most promising solution to gain better control over medical supplies while freeing up staff to focus on patient care. Additionally, it helps add precision and accuracy to medical supply management to optimize resource allocation and ensure smooth materials management.

The weight-based management system is primarily utilized in PAR-level configurations, where minimum and maximum quantities are specified. This automated system combines weighing scales with inventory bins. When inventory falls below the 'Min' level, an order is automatically placed to refill the inventory up to the 'Max' level.

These days, when AI and predictive analytics are revolutionizing the decision-making and operational efficiency processes, current inventory management systems must provide advanced data analysis models that will ensure better resource allocation of staff and budgets, and provide insights into stock levels and usage patterns. Analyzing this data enables informed decisions on procurement and replenishment, reducing the risk of stock-outs or overstocking, and identifying cost-saving opportunities. Leveraging product data empowers healthcare facilities to operate efficiently, improve patient care, and maximize financial resources.

This white paper will look at new breakthrough technology, in the form of a digital, wireless and weight-based PAR bin. We'll compare the features and benefits of this next-level technology with existing systems.



Weight-Based PAR Bin for Medical Supplies Management

In today's market, there are two prominent companies in the healthcare sector that stand out in their ability to provide hospitals with an automated solution for inventory management in a way that is compatible with the white glove solution approach.

The Wireless Weight-Based PAR Bin by IDENTI represents the next generation of PAR-level management in healthcare. This innovative solution features a patented design that includes an integrated digital scale within each individual bin, offering full portability, flexible placement options, and automated precision. Equipped with integrated AI management software, healthcare facilities can optimize inventory levels based on actual consumption patterns, thereby reducing the risk of stock-outs and minimizing wastage costs.

By automating the replenishment process, valuable time is freed up for healthcare professionals. The Weight-Based PAR Bin perpetually monitors its stock, using inventory levels and preset order point data to trigger restocks. Engineered to minimize labor and enhance accuracy, the Wireless Weight-Based PAR Bin is poised to revolutionize medical supplies management. The Bin is designed to enhance the management of bulk hospital supplies stored in PAR level configuration in storerooms, operating rooms or procedural labs.

In front of it stands a PAR weight-based system competitor, with products incorporating digital scales in storage bins to accurately monitor inventory levels. While the Weight-Based PAR System offered by this competitor is deployed in many US facilities and offers numerous benefits for healthcare inventory management, there are also some considerations to take into account.

How efficient are weight-based PAR systems and what are the differences between traditional weight-based units and the new wireless digital bins?

Challenges faced by providers

Providers are keen to streamline their medical supply management processes and improve the quality and quantity of data collected. There is a growing awareness that technology can be used to add speed, efficiency and accuracy to the management of medical supplies in healthcare settings.

"Convoluting processes, plus the presence of inaccurate and incomplete data were the perfect storm that created a constant stream of purchase requisitions. Our inefficiencies were adding extra burdens to our workload. We knew that we needed to work smarter."

Supply chain tasks are a burden to nurses so adding automation boosts job satisfaction.

"One customer asked nurses about their job satisfaction relating to managing bulk supplies in the department. This was a manual process at that point and they found that the overall satisfaction rating among the nursing team was just 53%. They were determined to improve both their processes and nurse job satisfaction."

We looked at how weight-based PAR systems can support the management and control of medical supplies and the impact this can have on nursing and materials management staff. We assessed two weight-based PAR systems against criteria that served to highlight the strengths and weaknesses of the systems and help to distinguish between them.

Comparison IDENTI Medical and PAR weight-based competitor for Weight-Based PAR Solutions

We used industry analysis and customer feedback to compare IDENTI's Wireless Weight Based PAR Bin solution with the competitor's weight-based units. IDENTI's technology is brand new on the market and this white paper will review the capabilities of wireless, weight-based PAR against traditional weight-based options.

Here is the comparison of IDENTI Medical and the weight-based PAR competitor:

	IDENTI Medical	Weight-based PAR competitor
Weight-based bin Is the system a fully autonomous?	<p>Wireless PAR bins is a fully autonomous weight-based inventory management system.</p> 	<p>A well-known competitor in weight-based PAR inventory management.</p> 
Wireless Is the system fully portable for maximum flexibility?	<p>Each bin is a standalone bin, operated via a wireless connection, with no cables. The smart bins come in 5 different sizes for ease of integration into existing storeroom layout and hardware, making them a fully portable and flexible option. The solution is designed to respond to the needs of the users and organization and does not require the supply area or provider to have to plan around or accommodate units or racks. In this way the individual bins can ensure the optimization of the supply space.</p> 	<p>The competitor scales are attached to a rack or wall mounted unit and bins are placed on top of these scales and wired into the unit. While the wheeled racks have a certain degree of portability, the entire rack is an integrated unit of weight-based bins that must be used as a complete unit and cannot be separated into individual bins. The wheeled racks and bars can only be moved as space permits. The wall-based unit is fixed and cannot be moved at all.</p> 
Nursing and logistics staff satisfaction How has the introduction of the weight-based technology improved staff satisfaction?	<p>Average reduction of 86 - 92% in nursing time spent on supply organization. Average increase in nurse satisfaction from 53% to 90%. Average reduction of 40-50% time spent by logistics staff managing supplies in the department.</p> 	<p>Unknown Our competitor does not indicate data relating to staff capacity or satisfaction.</p> 




IDENTI Medical


Weight-based PAR competitor

Initial hardware investment
Financial outlay - the upfront costs that must be taken into account where budget limitations are in place.

The standalone bins can be placed on existing storeroom shelves and racks. No special hardware is required as the system is designed to fully integrate with current room layout and configuration. This keeps costs to a minimum as the introduction of the weight-bins can be undertaken with existing hardware.

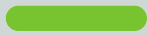


The bins require a wall-mounted unit requiring pre-installment, adequate space, and specific requirements. This will require the removal of existing hardware. In addition, the wall may need preparation, for example the moving of existing light fittings, power outlets etc. The rack system does not need the same requirements, but the whole rack must be purchased with no option for single bins which can inflate the costs.

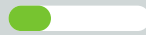


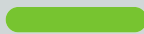


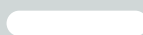


Hybrid options
Can be used as a hybrid solution with other automated Kanban and PAR systems running side by side using the same managing software.

Our wireless smart bins are designed for open shelving and racks. We have alternative Kanban and PAR automation tools, such as the digital ReStock Tags and the Scan&ReStock App, which are suited to different types of hardware, like closed shelves, cabinets and drawers. All of IDENTI's Kanban and PAR automation tools share the same managing software, meaning that a wide range of settings and hardware types can be digitally and remotely managed, and that all supply data is centralized. IDENTI has both Kanban & PAR options in its range of automated supply management solutions. These can be rolled out as a single or hybrid automated solution, or can also run alongside a manual system.



There are solutions for shelf, cabinet and hanging configurations and the various racks and units share the same software. However, there is less flexibility with this system, which operates by operating a weight-based system across whole walls, bars, shelf or cabinet a weight-based as the system cannot integrate into every type of hardware, this limits the automated hybrid options available. In addition, PAR weight-based competitor offers PAR-level solutions only.



	IDENTI Medical	Weight-based PAR competitor
<p>Integration Ease of deployment into current storeroom set up without any disruption.</p>	<p>Suitable for slotting seamlessly into existing supply room hardware and configurations. Our system is designed for ease of integration with minimum disruption. Due to its small size it can also utilize currently unused, or underused spaces, such as a small shelving unit in an alcove. Our flexible bins transform supply rooms, and any suitable space, into a digitally managed inventory hub.</p> 	<p>Current wall furniture such as light-switches may end up covered by the wall unit and will need re-siting. Large units, bars and racks have fixed sizes and the room needs to accommodate the system, rather than the system accommodating the room.</p> 
<p>Proximity to power supply How far do the bins need to be from a power source?</p>	<p>The smart bins are all wirelessly connected to a control unit that needs to be located within a 150 feet radius from the position of the bins.</p> 	<p>Our competitor's weight-based PAR units must be positioned close to a power source as the unit is cabled and requires plugging into a power socket.</p> 
<p>Bin label automation How dynamic are the bin labels?</p>	<p>An EPD (Electronic Paper Display) "label" displays dynamic information on the SKU stored in the bin. such as current inventory quantity and order status. The digital display is easily updated via the app. ensuring the label remains up to date and relevant. It's easy to digitally switch the SKU data stored when changing the product stored in the bin, it's all via the app with no need to print labels. Data, such as order quantity and status automatically updates in the app and on the bin's digital label, keeping everyone up to date.</p> 	<p>Printed labels must be updated for every information change, or when switching the SKU stored in the bin. Once printed, the data is fixed until it is next corrected and reprinted. It is not dynamic.</p> 

	IDENTI Medical	Weight-based PAR competitor
<p>On-site real-time data What information is visible to nurses and medical staff in the supply space?</p>	<p>With the Wireless Weight-Based Bin, the medical team can view dynamic stock data via the digital label, without needing to contact materials management or log into a system or app. The dynamic label displays the SKU catalog number, product description, current stock levels, restock status, and reorder quantity. All key information is displayed and auto-updated on the label ensuring the current picture is easily communicated to all.</p> <p><input checked="" type="checkbox"/></p>	<p>The PAR weight-based competitor system does not contain dynamic stock data on the bins. Nursing staff would need to log into the software to find out the order status of individual items or, if there is a QR code on the label, this requires an app to access the information.</p> <p><input type="checkbox"/></p>
<p>Change of SKU How simple is it to set up a new SKU in a bin?</p>	<p>The Weight-Based PAR Bin is simple to set up. It can be carried out via the managing software or at the bin location, using a mobile app. There is no need to generate or attach a bin label - the system displays all key stock data on the bin's digital label. Should the product stored change, reallocating a different product to the bin is simple and once complete the digital bin label will display the new SKU information.</p> <p><input checked="" type="checkbox"/></p>	<p>The process involves setting up the new SKU via the software, printing a label and attaching it to the relevant bin. Any changes to the SKU stored in the bin need to be actioned via the software and a new label will then need to be printed and attached to the bin.</p> <p><input type="checkbox"/></p>
<p>Suitable for all stock types Suitable for all types of stock in all shapes, sizes, and locations.</p>	<p>5 different bin sizes that cover 95% of item sizes, including a dedicated solution for suture management. Suitable for Meg/Surg, operating room, procedural room, and health center/MOB settings.</p> <p><input type="checkbox"/></p>	<p>Diverse combination of different scale/bin sizes and racks, including a specialist rack for suture management. But unit size can limit suitability for predefined spaces, or room with minimal wall space or capacity.</p> <p><input type="checkbox"/></p>



IDENTI Medical

Weight-based PAR competitor

Cloud-based software + SaaS model
What does the software do and what is the fee model? Is it able to provide full "white gloves" solution?

The IDENTI Platform collects medical supply data from our various Kanban & PAR data collection tools across all associated healthcare facilities, and centrally processes this data using AI cloud software. The system also utilizes machine learning and predictive analytics to generate data trends and insights. The Dashboard is designed for use by materials management, providing the key information needed to remotely monitor, manage and control hospital supplies stored across all locations and facilities. The IDENTI Platform is charged out via a monthly SAAS fee. With the cloud-based technology we can enable medical supplies provider to conduct fully white gloves solution, including installation and replenishment directly to the bin- without involvement of the hospitals.

Our competitor's system collates data from the PAR weight-based range of solutions and generates statistics reports, and alerts for important information. The charges for the system are included in the monthly subscription fee paid by users. Our competitor provides a "self-install" model in addition to "on site implementation" so in terms of "white glove" the service commitment from our PAR weight-based competitor would depend which option the provider chooses, or is able to afford. In some cases, pricing may prevent access to the "white glove" service.

AI-driven dashboard, predictive analytics and insights
The ease of accessing inventory data and the usefulness of this information

The system provides real-time metrics, reports and analytics, pulling data from across all of IDENTI's Kanban and Bar data collection tools. Technologies used are AI, machine learning and predictive analytics. Reports include expiration, PAR level, zero turn items, restock frequency and more. The system converts inventory data into meaningful metrics, reports and insights to support smarter supply management.

Our competitor provides a dashboard that helps users to track and analyze data from across the PAR weight-based storage infrastructure. There is a traffic light system to indicate the risk status of the data displayed. Reports/analysis include PAR levels, usage, turns, order reports, expiration reports etc.



	IDENTI Medical	Weight-based PAR competitor
Room suitability Nursing stations, OR core, Cath labs, procedural areas, Emergency room, clinics, office building, ASC, other storage room areas	IDENTI's solutions are suitable for all settings, and the fact they are based around individual bins and not units, makes them the most flexible option in terms of integration. IDENTI uses smart cabinets for medical devices, tissue and implant management, with different configurations available for the different settings, eg. hanging space, shelves, drawers etc.	PAR weight-based competitor is using a weight-based system for all types of stock, including implants and high-value inventory. They have different types of scale designed for shelves, units, and hanging stock too, making them suitable for different setting.
Installation What on-site support is offered to providers as part of the implementation package?	IDENTI Medical always sends a small on-site team to work in partnership with health facility staff on all installations, for smooth set-up, installation and training. Despite our on-site presence, our implementation package remains extremely competitive.	Our competitor offer customers a lower priced self-installation option. Price can therefore be a barrier to obtaining the full support required to ensure effortless installation. They also offer a higher-priced fully supported implementation service for those organizations who can afford this option.
Inventory reduction What cost-saving reductions have been since the introduction of the weight-based system?	Average 15-30% inventory reduction. Average 42-46% reduction in PAR levels, to lower the frequency of orders and reduce the stock at hand for slow-moving products. Average decrease in procurement costs of 15-20% due to demand-driven restocks.	10% reduction of on-hand inventory in the first year. 5-10% First year spending reduction from obsolete-item management and overstock return fees

Conclusion

Both the IDENTI and competitor's weight-based PAR systems have many beneficial qualities. However, it appears that IDENTI's Wireless Weight-Based Bin provides "next generation" technology that signals the beginning of a new era of wireless weight-based PAR. This offers added flexibility to healthcare providers and gives IDENTI a distinct advantage over our competitor's fixed wall units.

By seamlessly integrating technology and automation into individual inventory bins, the Wireless Weight-Based PAR Bin eliminates the need for manual inventory checks and facilitates real-time monitoring of supply levels, while being the most flexible option to locate and integrate into existing supply spaces, configurations and layouts.

The Wireless Weight-Based Bin not only streamlines inventory management processes but also ensures efficient and timely restocking while enhancing workflow efficiency. The automation of requisitions based on automated demand-triggers minimizes the risk of stock-outs and wastage, while significantly reducing the workload of nursing and logistics staff.

The enhanced technology and additional benefits of IDENTI's Wireless Weight-Based Bin make it a superior solution for modern healthcare facilities seeking to optimize supply chain management and improve operational efficiency.

*Interested in learning more about how
IDENTI transforms inventory
management?*

Our experts are here to assist you.

CONTACT

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ABOUT IDENTI MEDICAL

IDENTI provides hospitals, medical device manufacturers and logistics companies with patent-protected data-capture solutions to create a real-time account of medical inventory and consumption. The unique combination of autonomous end-devices, intelligent software, a raw database, and seamless connectivity, revolutionize financial efficiency, increase patient safety, and solve health management challenges at point-of-use.