



DAK

SOLUTIONS



**AUTOMATION
SOLUTIONS**



**STORAGE
OPTIMIZATION**



**SAFETY &
PROTECTION**

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ABOUT DAK

DAK Solutions is a premier material handling solutions integrator based in the Chicago area. Founded in 1995 by David Kenealy, DAK Solutions partners with customers to provide integrated material handling systems that address their specific needs. We plan and layout facilities, provide a variety of services, design and build storage systems and integrated material handling systems, and deliver value-added solutions to our customers.

We have completed numerous projects for major companies in manufacturing and distribution across the country, including Coca-Cola, 3M, UPS, FedEx, United States Air Force, and many more.



OUR TEAM



Dave Kenealy

President & Founder

Dave founded DAK Solutions with the mission that we would put our customers' needs first and use every resource possible to meet them. From making his first sales call in 1995, to installing a system on the top floor of a Chicago skyscraper, Dave proves that out-of-the-box thinking provides valuable results for our customers. After 25 years in operation, we owe our success to Dave's guiding principles, exemplary leadership and 35+ years of industry expertise.



Rhonda Zielinski

Senior Vice President of Sales & Marketing

Rhonda brings 30+ years of experience in the industrial sector to DAK. As SVP Sales & Marketing, Rhonda does an impeccable job of ensuring DAK's customer team (sales, project management & engineering) provide our customers with the perfect solutions that drive your business forward. Paramount to the entire team is to ensure that the best customer experience and long term partnership is achieved.



Garrett Rowe

Senior Engineer

As Senior Engineer, Garrett provides the CAD engineering for all DAK projects. Garrett has 10 years of material handling experience, and an educational background in Engineering and Logistics & Supply Chain Management. Garrett is an indispensable member of our team and works tirelessly to help ensure all customers receive a cost effective and efficient warehouse solution.

OUR PROCESS

We use a high-touch approach to ensure your business needs are met. Our dedicated team is available to consult with you every step of the way.



Situation Assessment

We will first conduct a thorough situational analysis and site review to ensure we understand your vision and your expected results.

Solution Design

Based on your requirements, we will customize a system for your business. This includes design, layout, systems specification, systems integration and outcomes.



Implementation & Commissioning

Your customized solution will be installed and tested. All equipment and software will be thoroughly tested, live on-site, to prove and demonstrate expected performance and results.



Learn more at www.dak-solutions.com/services



OUR SERVICES



Warehouse Strategy & Planning

Careful and thorough consideration must be given to every aspect of planning for existing or new facilities. Location, size, clear-height, product flow, customer demographics, risk abatement and more must all be scrutinized to both achieve and maintain your goals. DAK can help you with every aspect of your planning and help you find the solutions that you need.



Warehouse Automation Design

Let DAK design a warehouse system that helps you work smarter. With warehouse automation, you can:

1. Cut your expenses per order.
2. Optimize your team and resources to work more quickly.
3. Increase accuracy rates and on-time shipments.



Engineering & Design Services

We have engineers on staff who design your system in-house, so you can worry more about getting orders out the door and less about whether or not your warehouse is running efficiently. Our experienced team of engineers will work closely with our project managers to provide the optimal solution that fits your needs.



Project Management

Your dedicated PM will oversee your entire warehouse project; from needs analysis, to design, to installation. By gaining a complete understanding of your facility, the inventory you manage, and the goals that you have for your business, he/she will help design a solution that can not only address your current needs, but also take you into the future.



Inspection Services

Working with DAK means you won't have to hire a 3rd party for anything, including inspections and repairs. Our team provides a comprehensive inspection service by interviewing employees, inspecting belts, gears and drive motors on conveyors, reviewing damaged rack systems, and repairing rack at a fraction of the replacement cost.

Learn more at www.dak-solutions.com/services



CASE STUDY

Rockwell Automation

Distribution Center
for Industrial Controls,
Drives & Motors



PROJECT OBJECTIVE

Rockwell Automation faced problems due to growth in the number of SKUs and daily orders shipped. A turn-key system was required, which included secondary systems, such as HVAC, lighting, utilities, trash systems, etc.

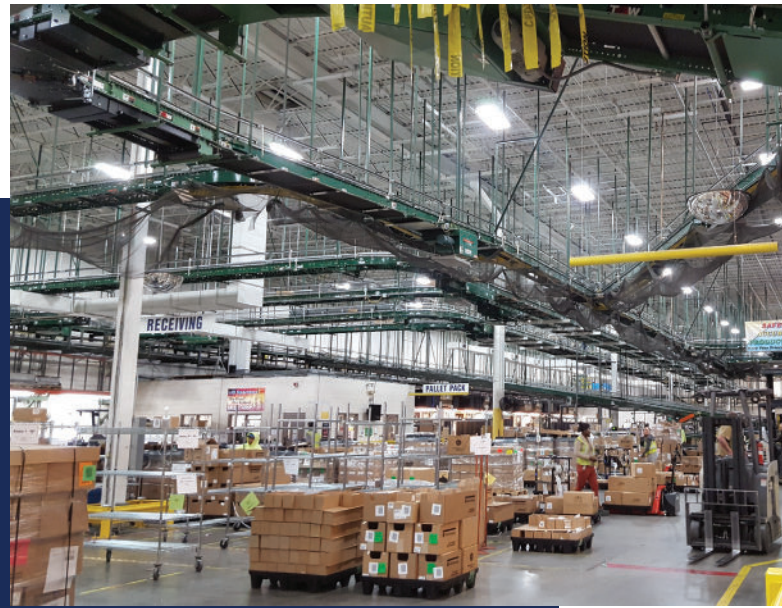
PROJECT SCOPE

The scope of this project included complete design, supply and installation of the pick module. The conveyor system included 8 pick zone modules, spiral conveyors, and a fully- integrated control cabinet.

- Building Square Feet: 250,000
- Approximate SKUs: 25,000
- Pick Module Footprint: 36' x 312'
- Conveyor Speeds (FPM): 60 to 210
- Pick Faces: 7,000+
- Orders per day: 20,000

CASE STUDY

Rockwell Automation Distribution Center





STORAGE & WAREHOUSE SOLUTIONS

SELECTIVE PALLET RACK

Depending on SKU count and quantity stored, single-deep and double-deep configurations are versatile toward any application.

Double-Deep Selective System

Double-deep systems can store two pallets deep, and reduce the number of aisles required. Application of this system requires deep reach lift trucks.



Single-deep Selective System

The building block of material handling, selective pallet rack provides efficient use of space and immediate access to every load or pallet stored.

GRAVITY FLOW SYSTEMS

- First-in, first-out, high-density storage
- Ideal solution for operations requiring good stock rotation
- Good solution for product dispatch areas requiring high turnover



HIGH-DENSITY DRIVE-IN RACK



- Loads are densely stored in lanes several pallets deep
- Ideally suited to operations with large quantities of a small number of SKUs
- Primarily used for operations where first-in, last-out is an acceptable storage method

VERY NARROW AISLE (VNA)



- Maintains selectivity of single-deep, while simultaneously increasing density
- Utilizes warehouse square footage by decreasing aisle size and increasing SKU positions
- Fewer steps to get from item A to item B on a packing list results in less time and effort to complete an order
- Specialized VNA stacker truck needed
- Quick and efficient output

AUTOMATED STORAGE AND RETRIEVAL SYSTEM (AS/RS)



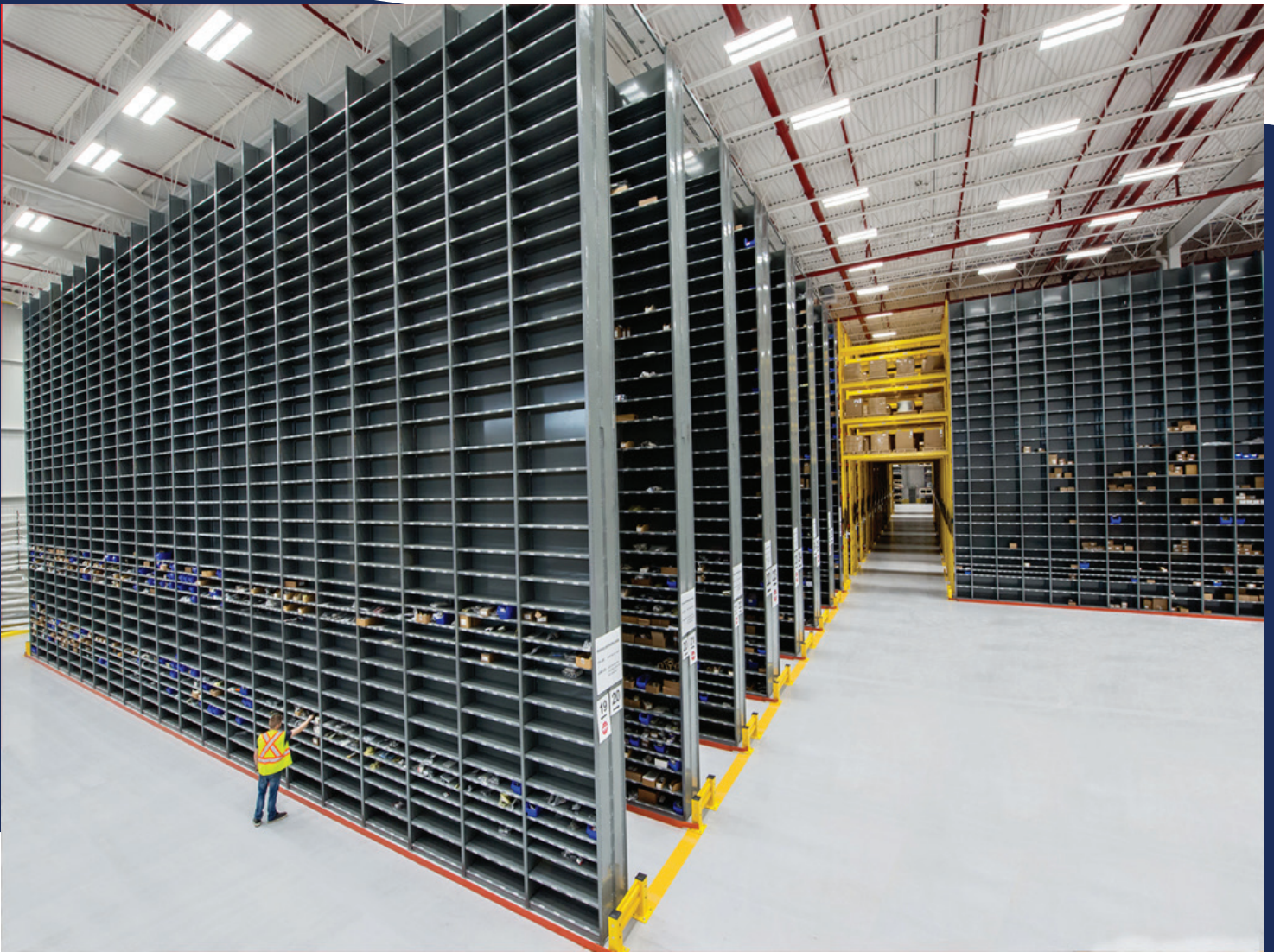
- High density automated pallet storage
- Uses a Storage/Retrieval (S/R) machine to move a load from the front of the system, and deposits the load to an empty location
- Returns empty to the Input/Output (I/O) area for the next pallet, or retrieves a pallet for use
- Minimizes employee safety risks involved with forklift operations

AUTOMATED STORAGE AND RETRIEVAL SYSTEM (AS/RS)



STEEL INDUSTRIAL SHELVING

- High-density, small part storage
- Can be configured to various heights, or into multilevel storage units
- Available as open units, closed units, or bin units



MOBILE AISLE SHELVING

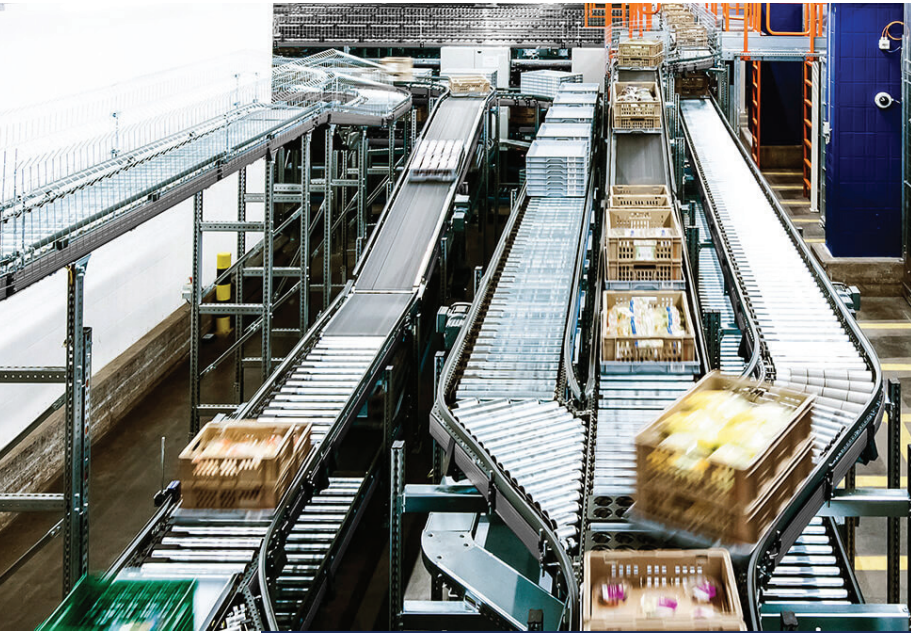
- Reduces the number of pick aisles required, increasing overall density
- Available as a powered or manual system
- Effective for high-density, infrequent picking





MATERIAL FLOW SOLUTIONS

CONVEYOR & SORTATION APPLICATIONS



- Optimizes operations
- Reduces operational costs
- Reduces manpower
- Increases capacity
- Improves accuracy and quality of work
- Ergonomically beneficial
- Portable, non-powered or motor-driven roller (MDR) conveyor sections available



PALLET SHUTTLE SYSTEM

- Saves time in storage and retrieval
- Pallets are extracted from the rack entrance so forklifts never have to enter the system
- Less aisles used through the warehouse
- Deeper storage creating greater storage capacity
- Reduced risk of damage to the racking
- Reduced risk of accidents
- Compatible with different pallet sizes



VERTICAL CAROUSEL

- Suitable to store bars or extrusions, sheet metal, plates, pallets, boxes, and other types of materials
- Virtually maintenance-free precision roller chains
- Saves time, space and taxes spent on larger building specs



AUTOMATED BAND SAW APPLICATION & STORAGE

- Frequency-controlled infinite saw drive
- Fully hydraulic saw feed control
- Linear-guided overrunning clamp device



- Increased productivity & storage capabilities
- Increased safety

The background image shows a large industrial warehouse. In the upper half, there is a mezzanine level with yellow safety railings. Below it, the floor is filled with tall, grey metal storage racks. Some racks have yellow boxes or containers on them. A yellow pallet jack is visible in the lower right. The ceiling is high with a complex steel truss structure and several bright industrial lights.

OTHER APPLICATIONS & SYSTEMS

PRE-ENGINEERED MODULAR OFFICE



- Allows quick, cost-effective installation of additional office space
- Can be relocated as needed
- Can be depreciated over 7 years as equipment, rather than 39 years as “real property”

FREE-STANDING ELEVATED STORAGE PLATFORM



- Access underutilized overhead clear space
- Support equipment, piping, conveyors, products, etc.
- Allows for elevated plant or factory offices
- Creates additional storage space
- Creates safe access over machinery or equipment

VERTICAL RECIPROCATING LIFT



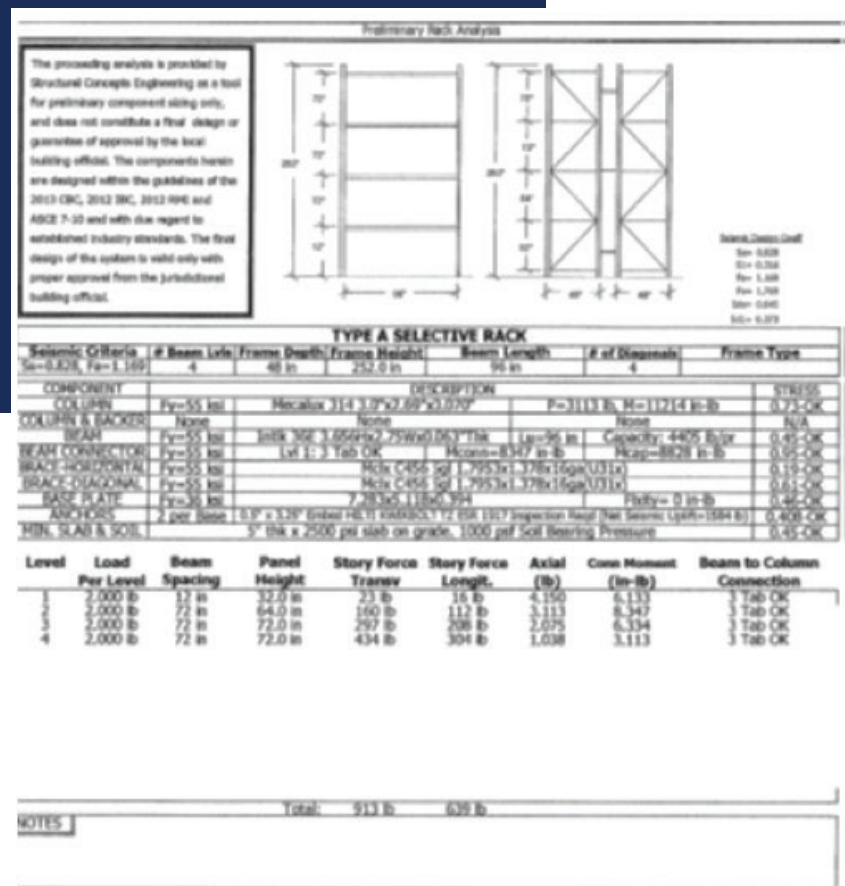
- Useful for transporting product between storage levels of an elevated storage platform
- Can be operated manually or automatically
- Available in a wide range of capacities, speeds, and footprint sizes



ENGINEERING & ANALYSIS

PRELIMINARY SPECIFICATIONS

- Preliminary specifications help determine what type of racking, reinforcement, etc, is needed for each configuration
- Seismic calculations take specific seismic zones in the US into consideration when engineering racking configurations
- Preliminary calculations compute specific size anchoring, slab analysis, and height-to-depth ratio



CAD LAYOUT & ELEVATION DRAWINGS



DAK has the capability to provide:

- CAD layouts and elevation drawings for use in planning and installation of any system (from standard rack to automated conveyor systems)
- Preliminary seismic calculations
- Stamped PE or SE drawings
- Permits

SLOTING ANALYSIS

- Managing where and how much inventory is in your racking systems affects how long it takes your team to process orders and get shipments out the door
- Slotting eliminates inefficiency by making intentional choices about where you are placing inventory
- DAK offers slotting analysis services



INTEGRATION

SYSTEMS PROGRAMMING



- Software
- PLC Integration
- Robotic Integration
- Installation includes electrical panel boxes, wiring automated systems, automated wrapping machines, etc.

INTEGRATE PROGRAMMING LANGUAGE



DAK can provide:

- Programming language across systems for complete integration solutions
- Warehouse management system programs



RECAP

3 ABOUT DAK

9 STORAGE & WAREHOUSE SOLUTIONS

- Selective Pallet Racking
- Automated Storage & Retrieval System
- Gravity Flow Systems
- High-Density Drive-In Rack
- Very Narrow Aisle Racking System
- Steel Industrial Shelving
- Mobile Aisle

18 MATERIAL FLOW SOLUTIONS

- Conveyor & Sortation Applications
- Pallet Shuttle System
- Vertical Carousel
- Automated Band Saw Application/Storage

23 OTHER APPLICATIONS & SYSTEMS

- Pre-engineered Modular Office
- Free-Standing Elevated Platform (Mezzanine)
- Vertical Reciprocating Lift

27 ENGINEERING

- Preliminary Specifications
- CAD Layout and Elevation Drawings
- Slotting Analysis

31 INTEGRATION

- Software
- Systems Programming
- Integrate Programming Language