

Case Study:
RoboVault
Fort Lauderdale, FL

RoboVault
MAXIMUM SECURITY ROBOTIC STORAGE



Westfalia Technologies, Inc. recently partnered with real estate developer, The Pugliese Company, for a new venture named Automated Self Storage Systems, LLC. This partnership ushers in a new era of self storage by bringing Automated Storage and Retrieval Systems (AS/RS) technology typically seen in the warehouse and manufacturing plant to the self storage customer. One of our first Automated Self Storage System clients is RoboVault.

RoboVault's unique self storage approach is maximum security robotic self-storage for high value objects. Their facility combines cutting edge technology with state of the art security systems that make the facility virtually impenetrable. In addition to the convenience for customers of 24/7 first floor access from the automated self storage system, peace of mind is the key to RoboVault storage. The air-tight facility is built to keep items safe and secure from both theft and

the elements. Technological safety features include heart beat detection, biometric and keypad (PIN) recognition, 24/7 security monitoring, smoke detectors, sprinklers, climate controls, and 14 day emergency energy back-up.

The first RoboVault is located in Fort Lauderdale near the Fort Lauderdale/Hollywood airport off US-1 and I-595. The state of the art facility is 90,000 sq.ft. and stores 456 containers. Designed to withstand

- AS/RS
- *Savanna*.NET® WMS

The Challenge: Maximum Security Robotic Self Storage



the 200 mph winds of a category 5 hurricane, it is constructed of solid concrete with reinforced steel, a solid concrete roof, and double pane impact resistant glass. This airtight facility has museum quality climate control to store the most precious items safely, including separate areas for wine storage, safety deposit boxes, and automobile storage. In fact the wine storage area strictly controls both the temperature (55F) and humidity (65-70%) ensuring perfect wine storage year round.

The Automated Storage & Retrieval System supplied by Westfalia quickly and quietly delivers the storage container to customers at one of seven entry cabins on the first floor. The storage containers have a standard dimension of 10 ft. (W) x 20 ft. (L) x 8 ft. (H), and a



total weight capacity of 8 tons. Each container can be subdivided to fit an individual's rental storage needs in 5 ft. increments (5' x 5', 5' x 10', 10' x 10', 15' x 10' and 20' x 10'). Additionally, a 10 ft. x 20 ft. module base is also available for handling vehicles.

Once a customer is registered, he drives up to the facility into a

private entry cabin and accesses his module by entering a Personal Identification Number (PIN) on a keypad. The PIN entered signals the Storage and Retrieval Machine (S/RM) to claim the appropriate container and present it to the patron at that ground level entry cabin. An internal door to the storage system will then open, and the customer can access his

The Solution: High Density AS/RS and *Savanna.NET*® WMS

storage module. A call ahead feature is also available, so the S/RM has your container ready and waiting for you. Once finished loading/unloading of the storage container is completed, the customer enters his PIN again and the unit returns to storage. To maintain the air quality of the climate-controlled storage facility, the interior door closes, and then the exterior door opens allowing the customer to drive away.

The robotic self storage system runs off Westfalia's AS/RS technology. It consists of a Storage and Retrieval Machine (S/RM), a Satellite® load handling device which smoothly and quickly moves the container off the S/RM and in/out of the racks, and a conveyor

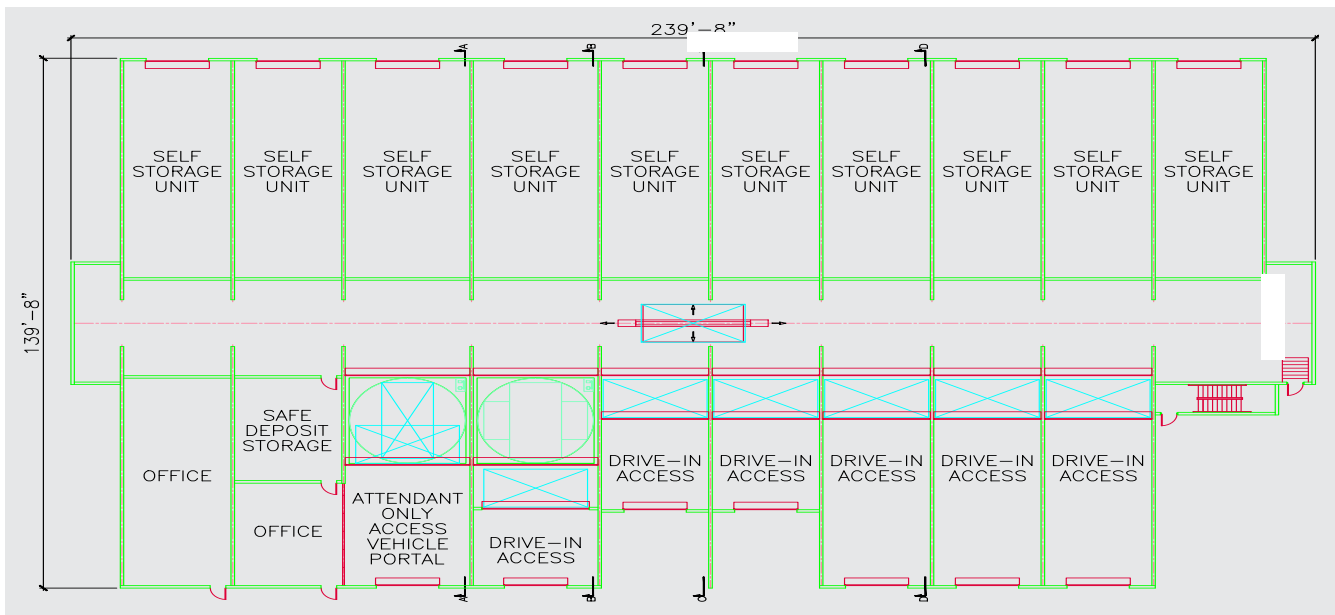
System Features	
Size	90,200 sq. ft. facility: ' long, ' wide, ' high
Capacity	<ul style="list-style-type: none"> ■ 539 storage modules ■ Storage modules in 5' increments to 10' x 20' x 8' ■ Maximum load 16,000 lbs. ■ 5 levels high ■ 7 display stations/customer access points
Technology	<ul style="list-style-type: none"> ■ Storage/Retrieval Machine to handle 16,000 lbs. ■ Turntable Conveyors to rotate storage modules 180 degrees, as needed, with weigh scales
WMS	<i>Savanna.NET</i> ® software

system. If needed, the S/RM transfers the container onto a turntable, so that the sliding door will be facing the customer at their appointed entry cabin. There are four levels of racks for storing containers and vehicles above the

ground level used for the seven entry cabins, offices, wine storage, and safe deposit box storage. The AS/RS stores containers in the racks on floors 2-5 up to six containers in a storage lane, and brings them down to floor level for customer access at the entry cabins.

Controlling, managing and tracking all container movements and facility operations is Westfalia's modular *Savanna.NET*® software. *Savanna.NET* interfaces with all RoboVault's security system and front office operations including customer information, credit card approval, keypads /





biometric human machine interface screens, video monitoring, motion sensing, and heat detection to verify the security of both the customers and their belongings.

The new facilities are more secure, convenient and faster than traditional multi-storage experiences, which most customers will recall as being anything but user-friendly.

As Gary Frank, Westfalia's Vice President of Automation explains, "The ubiquitous suburban self storage site with acres of garage doors offered the advantage of driving up, but there were still security concerns. Increasing land prices and increasingly strict zoning requirements make multi-story developments more cost-effective. And because urban

Benefits

- Customized automated system fits multiple building shapes, sizes and layouts
- Flexible module configurations from 2-6 per aisle and 2-15 high
- Increases net leaseable area up to 25% (F.A.R. calculated only as one floor)
- Slashes operating costs - Up to 50%
- Reduces building footprint and parking requirements
- Every space is a prime location - no need to discount
- Convenient 24/7 access with PIN code and biometric recognition
- Safe: designed to withstand Category 5 hurricane with 200 mph winds
- Secure: 24/7 security monitoring (video & heartbeat detection)
- Climate temperature & humidity controlled to protect belongings
- Back-up generator for 14 days emergency energy

land will continue to be in short supply, automated self-storage systems represent the future of storage supporting the needs of commercial and residential users. Westfalia's state-of-the-art automated technology has been used

in other industries for years, and is ideal for use in the self-storage industry."



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