



JohnsonDiversey,
Sturtevant, WI

**Dock Equipment
Helps DC Fulfill
LEED Mission**



The Johnson family has a long time connection toward protecting the environment. In launching a massive DC project for their JohnsonDiversey company, management chose to build towards a LEED Silver certification and ended up earning Gold. Kelley Company dock equipment helped JohnsonDiversey fulfill the mission of this sustainability program.

The company has sales locations in 160 countries is a leading global provider of commercial cleaning and hygiene products and solutions for food safety, food and beverage hygiene, floor care, housekeeping and room care, laundry, hand hygiene and industrial cleaning.

They sell their products directly and through distributors. To handle this tremendous volume JohnsonDiversey recently opened a 550,000 sq ft DC in Sturtevant, WI., which has staging for 118 tractor trailers and can house 47,000 product pallet loads.

The loading dock equipment – which is designed to act as an integrated system – backs up the LEED goals of energy efficiency coupled with employee comfort and safety. LEED -- Leadership in Energy and Environmental Design is a green building rating system administered by the US Green Building Council.

This is the largest LEED certified distribution center in the US. All electricity here is powered by renewable energy, wind or biomass. A typical 8' wide x 10' wide dock door can vent out a lot of precious energy if not properly sealed. According to Johnson Diversey regional warehouse operations manager Bruce Maple, "in setting up our dock we took into consideration a lot of factors."

To work in concert with the LEED program, the facility set up the dock equipment to work in a predetermined sequence. The line-up includes Kelley® Hydraulic dock levelers and APS-2000® vehicle restraints along with standard dock doors and dock lights – with all of their functions tied together by Kelley Master Control Panels.

**Kelley Dock
Equipment Marries
Safety and
Sustainability**

- *COORDINATES* the array of dock equipment to ensure the truck is at the dock with minimal training
- *SEALS* tightly by holding the truck trailer tight to the dock
- *HEAVY-DUTY* dock levelers hold up to constant traffic volume at JohnsonDiversey
- *SURE INSTALLATION.* *SafTframe* design enables fast, safe leveler installation and a level transition from the dock to the trailer

Johnson Diversey



They sequenced all of these components so there is a domino affect - the restraint secures the trailer, then the door opens, which then allows the leveler to operate, and lastly the dock light turns on.

"We did use our dock equipment to reinforce the energy saving part of our mission," notes Maple. "What we did was integrate our lights so that a trailer must be in place and the door up before the light comes on. When the truck backs out the light goes off."

The facility is a closed-door operation as the building is basically positively pressured. Air comes in through the roof and then pushed out through the sides using overhead fans. "We positively pressure the air to maintain LEED certification," says Maple. "For air quality this is an important piece. So you won't see the doors open for ventilation and are only opened when trailers are present."

Mike Weblein the project manager with Liberty Property Trust, which oversaw design and construction out of its Milwaukee office, pointed out that USGBC wanted the building to use MERF-13 filters on their air filtering system for the warehouse. "We would have to beef up our air system with more horsepower on our circulation system and would need bigger fans. That meant spending another \$100,000 in annual energy costs and another \$100,000 a year on filters, so we went back to USGBC.

"We were able to convince them that positive pressure would work. The system here now changes the air in the building once an hour."

"Our energy saving program is enforced by the Master Control Panel program at the dock," says Maple. "The dockworkers would have to override the vehicle restraints and then all the bells and whistles go off if they attempt to open the door without locking a trailer."

Employee safety is also part of the LEED mission. Drivers have a reliable, level interface from warehouse to truck trailers over the Kelley Hydraulic Dock Levelers. The dock levelers are designed and built to meet the unique demands of high volume operations like Johnson Diversey. The levelers are equipped with Kelley's unique SafeTFrame® design, which ensures proper application and structural support for the life of the unit, eliminates the need for installers to crawl inside the pit and place steel shim supports under the dock leveler's frame to level it with the warehouse floor.

SafeTFrame eliminates the need for shimming and reduces the installation time of each dock leveler by slightly 20 minutes. This time savings also equates to less time running internal combustion engines on welders and less cumulative emissions from those welders and welding rods. Considering the number of dock levelers installed per year, the cumulative benefit of this design change is significant.

The Kelley units also provide minimum lip crown for a level approach in and out of the trailer. The levelers can be equipped with a 5" high Dock-Guard Barrier Lip to prevent forklift run off from the dock when leveler is in the stored

position.

The APS Resource® APS-2000 vehicle restraint adds safety and contributes to energy savings as well. This impact-style vehicle restraint was developed specifically to reduce the occurrence of certain types of accidents at the dock. It has a low-profile carriage and an impact extension bar that accommodates a wide range of lower rear impact guards.

Holding trailers securely at the dock using the vehicle restraint also benefits energy efficiency. The end of the truck is encased within the Kelley TS Rigid Frame Shelter combined with Kelley's Aquashield® wiper seal system to keep rain and snow off the dock, thus preventing moisture collection on the leveler deck and slippery floors.

The Johnson Diversey facility has a 23/5½ operation with the down time given to maintenance, though the rugged construction of the Kelley and APS equipment affords them that time to devote to other areas of the facility.

Johnson Diversey was a long time user of another brand of dock equipment, but decided to go with the better quality of the Kelley/APS Resource equipment. The property around the building allows them to someday expand the building to a total of 800,000 sq. ft. as the Johnson Diversey business grows, and Kelley / APS Resource dock equipment is expected to part of that expansion.

