

# CASE STUDY



*A worldwide manufacturer of ANSI and IEC liquid filled transformers identifies Doerfer's*

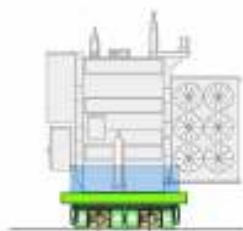
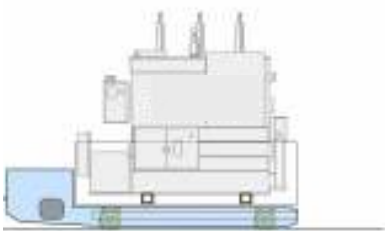
*Omni-directional Wheelift Technology as an attractive solution for use in their new and aging production facilities*

**Challenge:** To transfer and position tall bulky loads with high CGs weighing up to 150 tons in manufacturing facilities compromised by uneven surfaces, test cell openings, rail tracks, and fixed machinery locations. Facility cleanliness is critical.

**Solution:** Provide a wireless low profile family of electric drive Transporters designed specifically for use in transformer manufacturing facilities. Three weight classifications with shared designs drive reduced maintenance, training, spare parts, and commonality within worldwide facilities.

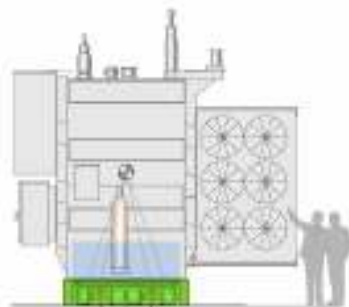
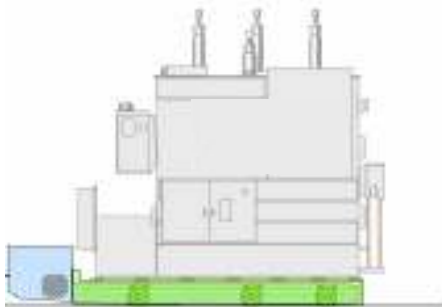
### Benefit

- Reduced costs
- Clean facilities - no air pallet dirt kick-up
- Greater productivity and facility utilization
- Process flexibility through elimination of rail carts, air pallet lines, and overhead cranes



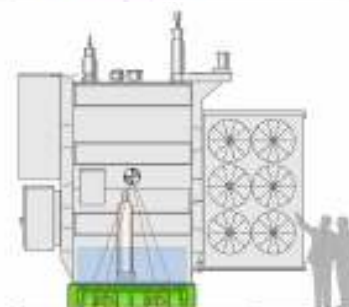
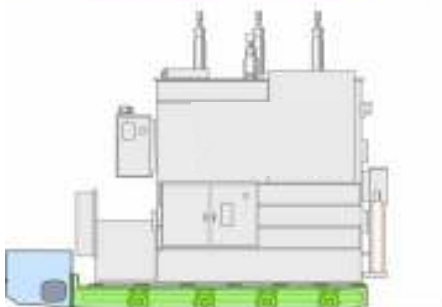
### 160,000 LB. GVW Transporter

8' wide x 14' long with 19" deck height  
(Based on 4 - 15" 40,000 LB. modules)



### 240,000 LB. GVW Transporter

8' wide x 18' long with 19" deck height  
(Based on 6 - 15" 40,000 LB. modules)



### 320,000 LB. GVW Transporter

8' wide x 18' long with 19" deck height  
(Based on 8 - 15" 40,000 LB. modules)

A global leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact needed a flexible, low profile, high capacity manufacturing method for moving a wide range of high value products.

Air pallets were no longer viable due to the dust they kicked up during operation. Floor cracks, porosity changes, and other issues tended to creep in over time driving air pallets to be an unreliable long-term solution. In addition, overhead cranes and door openings increasingly became limiting factors as product height continually grows.

Early evaluations identified many other limitations in the existing process. With the ever increasing product weights, the Wheelift technology quickly became the preferred performance solution driving process changes throughout the facility. This strategy led to the development of a family of Wheelift Transporters using generic platforms and identical components throughout each weight classification.

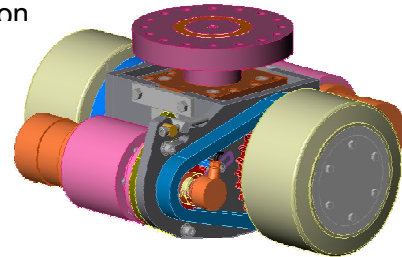


Each of the Wheelift Transporters has four/six/eight 15" diameter on-center rotation axle assemblies depending on the weight classification. With their 3-point fluid equalizing suspension, the axles have interconnecting fluid lines that divide them into load sharing groups to assure that every wheel carries only its specific share of the load, regardless of variations, slopes, and irregularities in the floor surfaces. Floor loading is dispersed with ground pressure loads distributed over a wide footprint.

Process-driven features include a flat deck at 19" for product access during manufacturing, 3% slope

capability, 5" vertical travel for self-loading and surface compliance, umbilical cord power backup cable, easy access power package, system monitoring, and wireless pendant control.

Pallet stands are a simple tunnel construction with load carrying side members and end cap. The universal Transporter chassis allows a universal worldwide pallet design to be used, driving economies for bulk purchases and design amortization



The **Wheelift Modular Chassis** provides low profile, high capacity, and a degree of flexibility not obtainable through other technologies. Worldwide niche markets drive manufacturing flexibility for product customization and configurable work processes. Wheelift Transporters and AGVs facilitate this requirement.

Manufactured in Iowa, **Wheelift** Transporters and AGVs are custom developed to each application including close positioning die loading, roll transfers, assembly, and general material handling. Load deck and fixturing is built to suit with load capacities to 500+ tons and deck heights as low as 18". Power options include LP gas, diesel, battery, or on-board generator. Electric or hydraulic drives are standard. For more information on our Wheelift Transporter and inertial/wire guidance AGV systems, please visit us at [www.wheelift.com](http://www.wheelift.com)

Headquartered in Iowa, **Doerfer** develops application specific, custom manufacturing systems and machinery - many which revolutionize the way our customers manufacture, assemble, move, package, and test their products. We thrive on your toughest process challenges for manufacturing. For more information on our capabilities, please visit us at [www.doerfer.com](http://www.doerfer.com)