

CASE STUDY



Major automotive supplier with design responsibility for GM's showing at the 2005 Specialty Equipment Market Association (SEMA) show selects Wheelift Transporter for Die changes

Challenge: Shigeo Shingo SMED methods drove an injection molding production facility to convert internal setups to external setups and eliminate overhead crane handling of dies in their new production facility. Die sizes can weigh up to 70-ton each.

Solution: A single pendant controlled 140-ton Wheelift Transporter with dual position roller deck for presenting an empty unload position to receive the outgoing mold, and a charged deck position for the incoming mold.

Benefit:

- Eliminates waste
- Eliminates parasitic downtime
- Eliminates overhead crane requirement
- Provides process flexibility



The 140 horsepower LPG engine powered mold changing Transporter is capable of carrying two molds at a time weighing from 30 to 70 tons each. With a twin-bed power roller deck, equipment efficiencies are quickly impacted on the larger injection molding machines subjected to ever frequent mold changes being driven by their automotive and consumer goods customers.



A typical mold change sequence will have the Transporter bringing the next replacement mold into the area. The operator maneuvers through narrow aisles with a hand help pendant from the centralized mold storage and prep areas. The operator will drive up a point that aligns the empty side of the twin roller deck with the mold that is to be removed. The Transporter travels laterally and stops at the required transfer distance. At that point, the entire Transporter will rise up on outrigger jacks to the appropriate transfer height. A "bore sight" is provided in each of the roller deck's end stops that allow the operator to visually align the rollers in the powered roller deck with the rollers inside the machine. The outriggers are a convenient and fast means of providing a level, solid, and stable transfer bed for moving molds on and off the transporter.



The Transporter has eight on-center rotation omnidirectional axle assemblies. 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 spread over a wide footprint.



The Wheelift module provides capacity along with 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

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