



Hand trucks (including carts and dollies), the simplest type of industrial truck, cannot transport or stack pallets, is non-powered, and requires the operator to walk. A pallet jack, which cannot stack a pallet, uses front wheels mounted inside the end of forks that extend to the floor as the pallet is only lifted enough to clear the floor for subsequent travel.

2. Positioning equipment

Positioning equipment is used to handle material at a single location. It can be used at a workplace to feed, orient, load/unload, or otherwise manipulate materials so that are in the correct position for subsequent handling, machining, transport, or storage. As compared to manual handling, the use of positioning equipment can raise the productivity of each worker when the frequency of handling is high, improve product quality and limit damage to materials and equipment when the item handled is heavy or awkward to hold and damage is likely through human error or inattention, and can reduce fatigue and injuries when the environment is hazardous or inaccessible.

Examples of positioning equipment include lift/tilt/turn tables, hoists, balancers, manipulators, and industrial robots. Manipulators act as “muscle multipliers” by counterbalancing the weight of a load so that an operator lifts only a small portion (1%) of the load’s weight and they fill the gap between hoists and industrial robots: they can be used for a wider range of positioning tasks than hoists and are more flexible than industrial robots due to their use of manual control.

They can be powered manually, electrically, or pneumatically, and a manipulator’s end-effector can be equipped with mechanical grippers, vacuum grippers, electromechanical grippers, or other tooling.