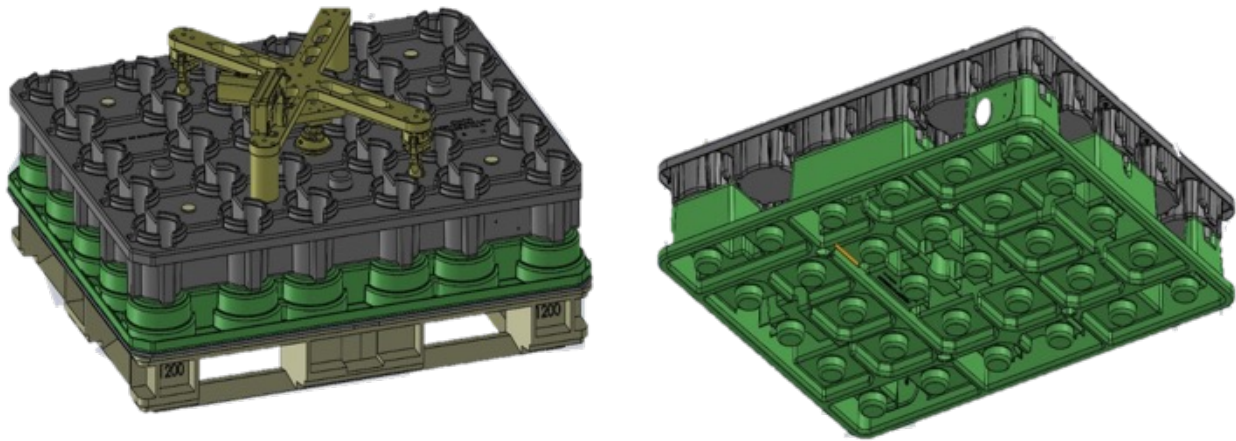


APPLICATION CASE STUDY # 119

RETURNABLE PACKAGING: Highly Automated Industrial Shipping/Processing Trays



APPLICATION:

High precision parts depend on highly precise processes. As the bar is continually raised on the ability to hold tight tolerances, the ability to process the product is constantly challenged. For these applications, a fully automated processing system is required. The challenge of how to move the parts from station to station and from supplier to supplier is solved by highly engineered injection molded trays.

PROBLEM:

The inability to hold tolerances to essentially fixture a part in a processing tray is a constant struggle for manufacturers. They are left with extremely expensive machined holding fixtures or limitations in size due to the ability to hold tolerances over large dimensions. The application started out with a thermoform tray solution, though the end user quickly found that the trays were not robust or repeatable enough to meet the requirements of the system.

SOLUTION:

The PolyFlex Engineering Team can design large full size injection molded trays that will not only hold tight dimensions over large distances but will fully integrate with automation vision systems. By placing colored vision targets in specified locations parts and trays alike can be handled with ease without human interaction. Where required TPU inserts can be strategically located and where critical part touch surfaces are required to be held with a softer and more durable material. Integrated fork pockets can even be added to certain applications eliminating the need for a pallet for the system and reducing the variance between the pallet and the automated tray system. Where integrated fork pallets cannot be accommodated, a slip sheet system can be added to a pallet to help fixture the trays on the pallet accurately and consistently.

