



## PDS VERSION 6.0

### ENHANCEMENTS IN VERSION 6.0

#### Ground-Breaking Unit Load Design Tool Minimizes Damage, Maximizes Profit

**PDS 6.0 Unit Load for Boxes** is the most advanced tool in the world that considers the interaction between wooden pallets and corrugated boxes. The tool takes technology normally associated with space flight, race cars, and jet engines, and uses it to gain insight into wooden pallets and corrugated boxes. PDS 6.0 allows pallet designers to prevent cargo damage, while optimizing cost and material efficiency. Additional improvements and new features included in PDS 6.0 are:

- Analysis of forklift from the side (notch) of panel deck stringer pallets.
- Specification of different flute profiles for multi-wall corrugated board.

#### Unit Load for Boxes

**PDS 6.0 Unit Load for Boxes** contains the first installment of system-level analysis tools for unit loads. System-level analysis considers the entire unit load to act as a complete structural system to support the weight of the cargo. System-level analysis allows for realistic load distributions on the pallet that consider the unique load distribution that occurs with different packaging. This is a departure from the traditional approach of assuming a universal flexible uniformly distributed load to design pallets, leading to a more realistic representation of the load distribution. What does this mean? For certain loads of corrugated boxes, the PDS user will be able to analyze these types of loads more accurately than ever before.

**PDS 6.0 Unit Load for Boxes** contains a ground-breaking tool for the design and optimization of unit loads of boxes. This is the first software tool in the world that considers the interaction between a flexible pallet and its cargo. PDS allows optimization of both the pallet design and the corrugated box material. The potential cost savings when optimizing the pallet is typically up to 1/8" thickness reduction for each component. However, in many cases, the savings for reducing cost of the corrugated packaging using a more rigid pallet design is orders of magnitude larger.

Plastic and corrugated pallet designs rely heavily on load bridging to manage deflections with these flexible materials. Were it not for load bridging, plastic pallets would have to be much heavier – far too heavy to be economical or practical. Plastic pallet load ratings are commonly based on a specific unit load design and must be tested for each one. With **PDS 6.0 Unit Load for Boxes**, wooden pallets have a software design tool that can predict these higher unit load ratings.

**PDS 6.0 Unit Load for Boxes** facilitates interaction with your clients at a new level, creating opportunities for optimization and problem solving. Unit load design is inherently custom. It adds value and avoids the pitfalls of commoditization. PDS gives near instant feedback on impacts to corrugated box loading for alternative deck board layouts and overall pallet stiffness.

**PDS 6.0 Unit Load for Boxes** can benefit the user in the following ways:

- Demonstrate the effects of deck board layouts and overall pallet stiffness on corrugated box performance. This can help explain the need for additional deck boards or the justification for removing them to your clients.
- Compare alternate pallet designs with respect to their effect on the box loading. Ensure that the box loading remains the same despite changes in pallet material, for example.
- Optimize the pallet to take advantage of load sharing with the cargo. Carry more load with the same pallet or optimize the pallet structure.
- Optimize the corrugated board by using a stiffer pallet. Allow use of lower strength corrugated material.
- Solve box damage issues by designing a better pallet.
- Build a stronger relationship with your client by discussing what goes on the pallet and how it interacts with the pallet.

Expertise in unit load design and analysis will require additional training for most PDS users. The training will cover corrugated box design, load sharing between the pallet and cargo, stretch wrap, and how to effectively use the new unit load analysis function in PDS. As you learn more about corrugated boxes, their specification, behavior and performance, you will also become a more proficient and professional, pallet designer. NWPCA is currently developing the needed training courses for existing PDS users. The training is expected to be available in the first half of 2020.

The ability to analyze unit loads of drums, plastic pails, and sheet goods are expected to follow in future versions of PDS.

## PALLET DESIGN HELP

A comprehensive **PDS User's Guide** is built into the software program to help answer questions 24/7 regarding pallet design. The User's Guide includes an overview of unit load analysis. It is readily available and accessible from the **Opening Window Start Dialog**, through the **Help** menu, and at the **bottom left of every window** within the design wizard. PDS Users can also search this valuable resource to learn more about pallet design from a variety of topics.

Stay updated on the Pallet Design System™ by opting-in to NWPCA email communications for "PDS News." If you need additional support assistance, contact 703-519-6104 or visit [www.PalletDesignSystem.com](http://www.PalletDesignSystem.com).