

OptiLedge Overview



PROTOPAK
Engineering Corporation

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OptiLedge[®]

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History – IKEA and the OptiLedge

- **Invented OptiLedge in 2000**
- **Use 17 million Ledges per year resulting in and €20 MM annual savings**
- **Eliminated wood pallets in inbound supply chain**



OptiLedge®



Ship Lean. Save **Green.**

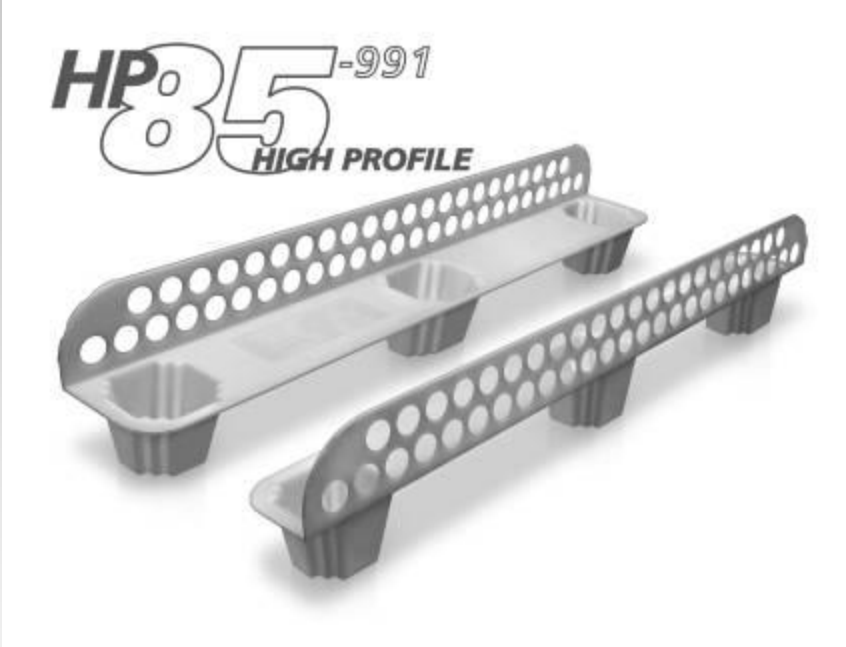


Production: USA, Czech Republic, China and Australia
Global Sales and Distribution

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OptiLedge Models



- HP85-760 HP95-760
- HP85-991 HP95-991
- HP85-1200 HP95-1200

- LP45-760
- LP45-991
- LP45-1200



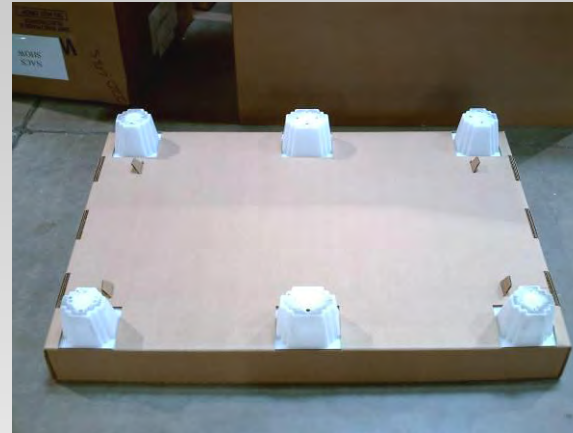
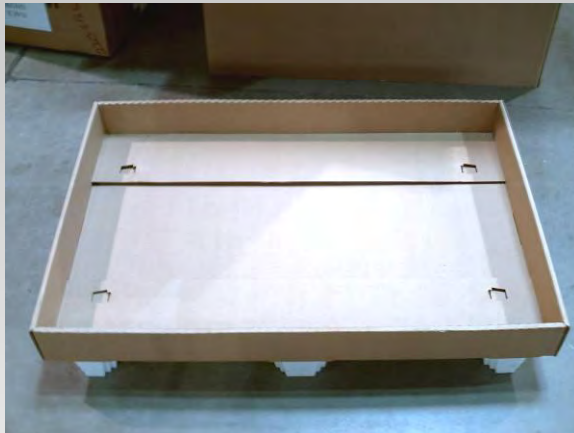
Sustainability – Space Saving



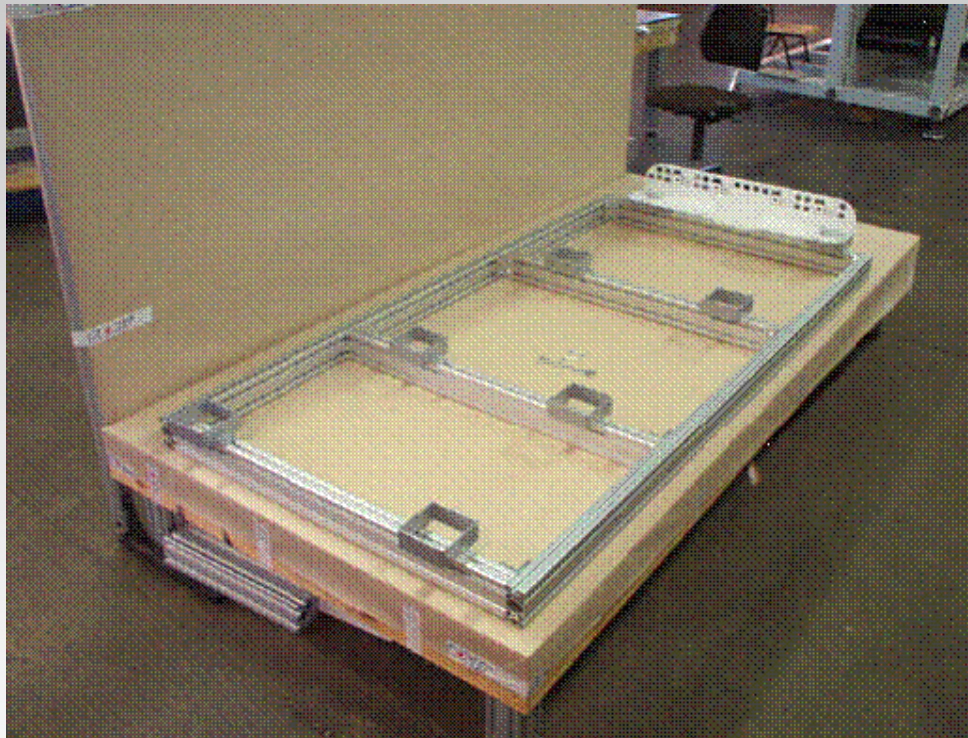
Sustainability – Weight Saving



Other Products - Trays



OptiLedge Solutions - Fixture





Ship Lean. Save **Green.**

OptiPal[®]

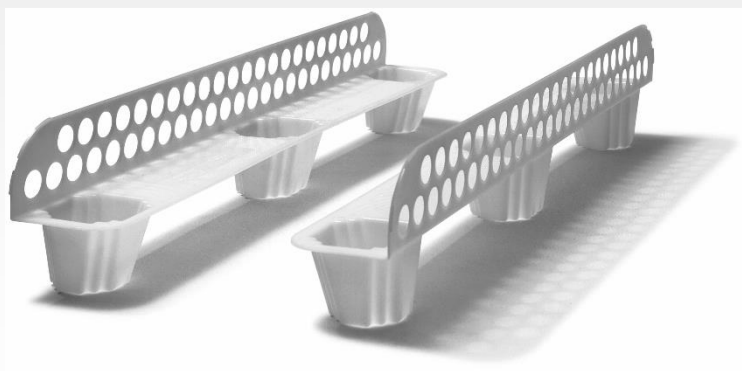
- > **Flexible, easy to create custom sizes**
- > **Waterproof feet**
- > **Acceptable for curbside recycling**
- > **Light, saving freight cost and CO2**



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Curb-Side Recyclable - No Heat Treatment Required



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Ship Lean. Save Green.

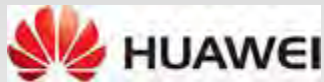
Millions in Use



COSTCO



Universal
Casket Co.



HUAWEI



ABACUS
SCALES & SYSTEMS



WINCHESTER
SAFES



SAM'S CLUB



LOWE'S
Let's Build Something Together



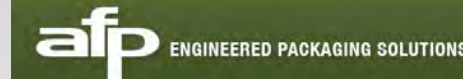
OptiLedge



IKEA



GNC
Great Northern Corporation



afp ENGINEERED PACKAGING SOLUTIONS



Pollock



CAFOM
CENTRALE D'ACHAT FRANÇAISE POUR L'OUTRE-MER



PHILADELPHIASIGN
BRINGING THE WORLD'S BRANDS TO LIFE



GROUP O



INTERNATIONAL PAPER



BEST BUY



Thomas & Betts
A Member of the ABB Group



YFYJUPITER.



Steelcase



REVARO
INDUSTRIAL



M 株式会社 明治工業化成



unisource



Walmart
Save money. Live better.

OptiLedge in the News: from *Slate* to *WSJ*

Transportation Payment Benchmark Study: www.AmericanShipper.com/Payment2012
 APRIL 2012
American Shipper
 INTERNATIONAL TRADE & LOGISTICS
Liner carriers attempt REVENUE GRAB

HOME ABOUT US PALLET INFORMATION REUSABLE PACKAGING INFO ASK BOB
PACKAGING REVOLUTION
 THE REUSABLE REVOLUTION
 SHUERT TECHNOLOGY
 We invest in solutions

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 KEA PALLETALTERNATIEF OPTILEDGE TE KOOP
Als elke kilo telt
 Ikea heeft een alternatief voor een zware pallet ontvikkeld: de OptiLedge, een neerbaar hoogprofiel met drie meegedragen kloossen. Door deze onder een zending te plaatsen en er een strap omheen te binden, ontstaat een stevig 'blok'. Het palletalternatief is nu voor alle exporteurs te koop.
 Ikea Phases Out Wood Pallets
 NOVEMBER 3, 2011 BY RICK LEBLANC 1 COMMENT

OptiLedge
 The OptiLedge, invented by Ikea and supplied by ProPack, is a fully recyclable plastic alternative to standard wooden pallets. The plastic pallet weighs much less than its wooden predecessor, and is precisely tailored to the cargo. This means that the transportation costs as well as less energy instead.
 The jury OptiLedge beautiful in its simplicity. "The draft is in practical terms a lot, despite or thanks to its simplicity. OptiLedge also has a big impact precisely because it is used by a large company that is close to the consumer."
 Both winners will receive a media package worth € 5.000 from publisher Industriefotografie and may designate someone to the court panel of the Sustainable Produced.
 Ikea, comfortable and intuitive
 It was the second time that the Enlightenment, shining examples for a sustainable business model. The photo was taken by S. van der Vliet

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 January 15, 2012

OptiLedge pallets across its global operations. The leading use of paper pallets and the OptiLedge for a number of

OptiLedge taking Ikea's pallet replacement system to the next level
 By Jim Johnson
 SENIOR STAFF REPORTER
 Published: October 1, 2014 11:49 am ET
 Updated: October 1, 2014 1:27 pm ET
 Jeff and Karal Lamb have been around the OptiLedge for years.
 Now it's their time to take the plastic alternative to traditional wooden pallets to the next level, the married couple said.
 OptiLedge has had a colorful journey since its invention by Ikea as a way to cut down on shipping materials for the Swedish mega-retailer.
 First the product — an L-shaped platform with feet that is commonly strapped to the bottom of products being shipped — was invented and marketed by the retail giant. Later, the pallet alternative was licensed to different companies.
 Image By: OptiLedge LLC
 The OptiLedge shipping system is an L-

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Unease on the waterfront

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The Single Most Important Object in the Global Economy
 The pallet.
 By Tom Vanderbilt
 Earlier this spring, the Washington Conservation Corps found a sudden influx of beach debris on the state's southwestern shores. Tines and tides were beginning to deposit the aftereffects of Japan's March 11, 2011, tsunami. One of the myriad objects retrieved was a plastic pallet, soured and swimming-pool green, bearing the words "19-4 (fold) (return required), and, below that, "Japan salt service."
 A year earlier, Dubai's police made the region's largest narcotics bust when they

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 LEAN SHIPPING PLATFORMS
 February 13, 2012 00:00 ET
IKEA Chooses Innovative OptiLedge Shipping Platforms Over Traditional Wooden Pallets
 ATLANTA, GA—(Marketwire - Feb. 13, 2012)—Leading International Retailer, IKEA, recently announced its plans to phase out the use of wooden pallets across its global operations and to transition instead to lean alternative shipping platforms consisting of loading ledges and paper pallets.
 "No other retailer in the world has committed to such a change," said an IKEA representative in a recent article by Packaging Revolution. "IKEA stores are the first global example of how to work with non-wooden pallets in a high-volume retail environment."
 IKEA made the decision based on the overwhelming advantages associated with plastic pallets and paper platforms. Though the change requires a complete overhaul of supply chain operations and routines, IKEA still found that it was the best business decision for the company.



Next Steps



OptiLedge[®]