

## REPEAT USE PACKAGING FOR SUPPLY CHAIN MANAGEMENT



Traditional packaging methods may result in damaged equipment, and major expenses

### IT'S ALL ABOUT THE MISSION

When an aircraft is in need of repair and crucial replacement parts arrive damaged, the result is lost revenue. If an aircraft is grounded, crucial repair parts must be in-stock and up to spec. The same applies to military operations – if the daily sortie count drops, the mission is at risk.

From keeping production on schedule to managing rotatable spares inventory, reusable packaging from Peli is all about control.

### THE PRODUCT

All Peli™ Cases are dustproof and crushproof, and can be specified as breathable or watertight. Sizes



can accommodate equipment from small electronics to large fuel pods. There are four distinct lines of cases available: Peli™, Peli-Storm, Peli-Hardigg™ Single Lid, and ISP².

**A** Our **Peli™** and **Peli Storm** cases include over 70 sizes and are guaranteed for life. Protection against liquids and dust is provided



by an O-ring seal. And the automatic Pressure Equalization Valve prevents vacuum lock caused by changes in air pressure.

**B** The **Peli-Hardigg™ Single Lid** case line contains over 325 sizes and can include optional features such as built in skid runners and bash plates for forklift transport. They are moulded from lightweight, high-impact polyethylene, and are gasketed to prevent water ingress. Single Lid cases are customizable with a wide range of options.

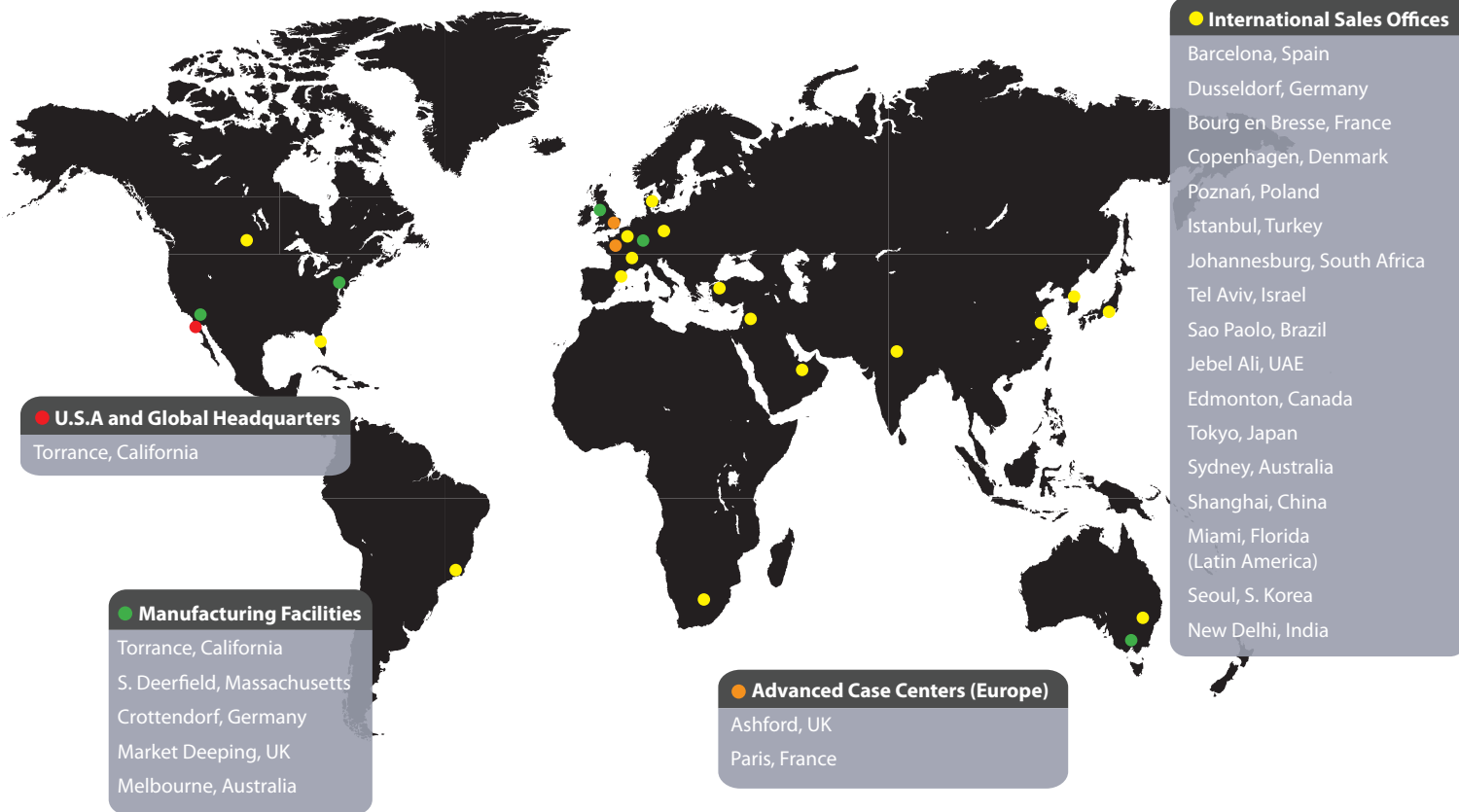
**C** The new **Peli-Hardigg™ ISP² Case** line is the ideal solution for volume shipping. The unique inter stacking pattern (ISP²) on the lid and the moulded-in cubes on the base eliminate load movement while maximizing cargo footprint.

### A CASE FOR REPEAT USE PACKAGING

Studies have shown that a durable, permanent packaging solution in shipment and storage is a cost-effective alternative to disposable packaging. Single use, expendable packaging such as cardboard or wood crates, require time and labour for assembly and disposal, and increase in-transit risk. With a Peli™ case, the cost is amortized over its life. On some models, it's recovered in as few as two trips.



Contact Peli for your free ROI analysis.



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**Peli guarantees its Roto Moulded cases for 1 year against defects in materials and workmanship and 90 days on hardware from the proof of purchase. All warranty claims of any nature are barred if the container has been altered, damaged or in any way physically changed, or subjected to abuse, misuse, negligence or accident. Refer to <http://www.peli.com/en/content/peli-warranty> for full details.**



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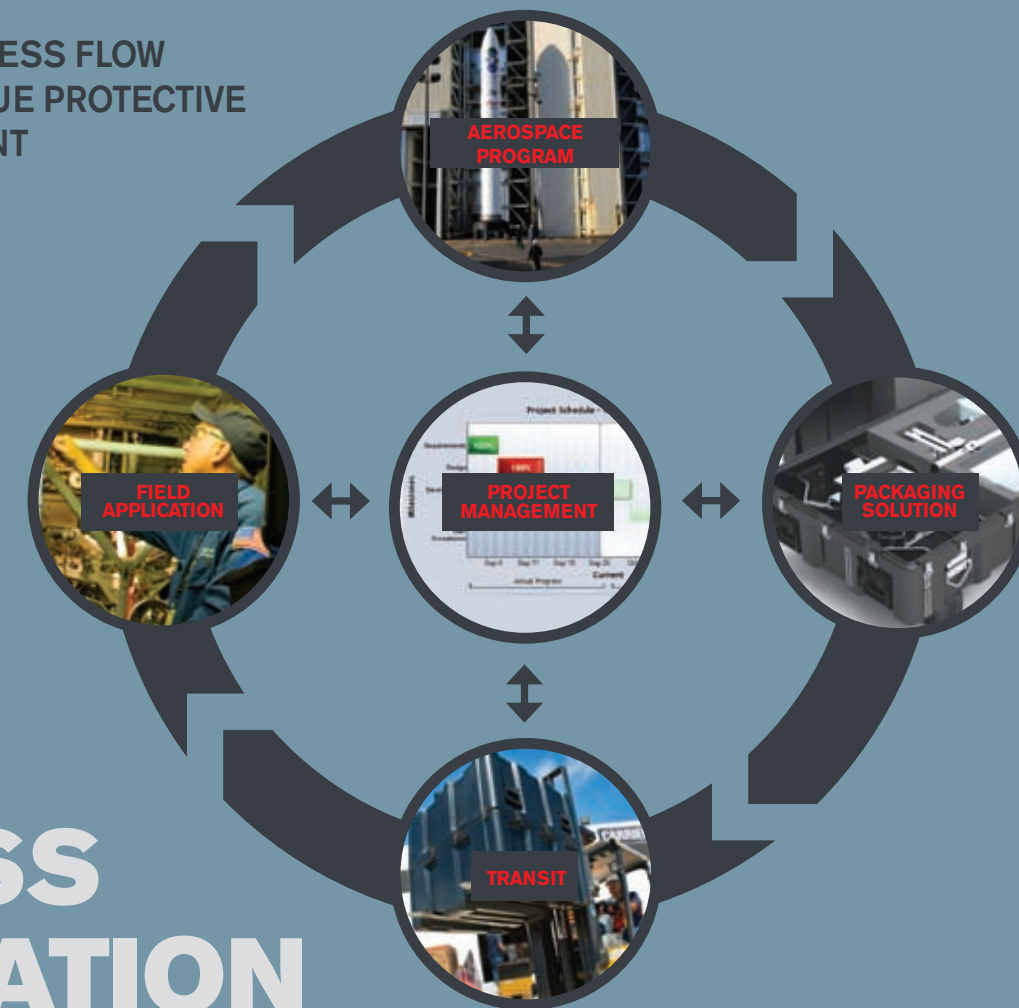
**PELI™**

## MISSION CRITICAL ADVANCED CASE SOLUTIONS FOR AEROSPACE AND DEFENCE



**WE DON'T MAKE HISTORY.  
WE HELP KEEP IT ON COURSE.**

## PELI'S INTEGRATED PROCESS FLOW ANTICIPATES YOUR UNIQUE PROTECTIVE PACKAGING REQUIREMENT



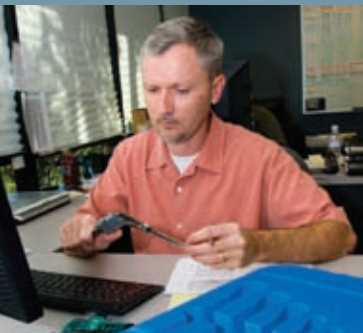
## PROCESS INTEGRATION



Peli-Hardigg™ Single Lid Case with custom engine mounts: the smart way to store and transport auxiliary power units (APU) for the aviation industry.



# ELIMINATE LOGISTICAL RISKS WITH ADVANCED CASE SOLUTIONS



## EVALUATION

### 4 STAGE CUSTOM ENGINEERING PROCESS:

- » Product Specifications
- » Customer Performance Needs
- » Product Interface and Access Points
- » Stability, Impact and Drop Requirements
- » Environmental and Field Conditions
- » Vent and Pressure Requirements
- » Mobility and Freight Compliance



## DESIGN AND ENGINEERING

- » CAD, 2D Layout and Solid Models
- » G-Force Mapping and Applied Cushioning Curve
- » Tooling Design
- » Equipment Support and Cradle Design
- » Part Isolation and Sway Space Planning
- » Usage and Operation Optimization
- » Environmental Analysis



## PROTOTYPING AND TESTING

- » Shock and Vibration Attenuation
- » Submersion and Rain Resistance
- » Shear Force Testing
- » Dust Particulate Ingress
- » G-Force at Specified Drop Heights
- » Extreme Temperature Tolerances
- » Mil-Spec Testing



## MANUFACTURING



- » Warranted Parts and Accessories Engineered to Specifications
- » Integration of Customer Parts and Accessories Per Functional Specifications
- » Quality Control Testing and Inspection
- » On Time Delivery
- » Technical Support

Advanced Case Solutions are the result of a multi-disciplinary, 4-stage process. Working closely with your team, our engineers can customize a protective system according to your product specifications, usage and environmental analysis.

# ANATOMY OF AN ADVANCED CASE SOLUTION

## CASE MANUFACTURING

Peli-Hardigg™ is the world leader in protective case solutions, earned over a 50 year long journey. Along the way we perfected injection moulding, roto-moulding and robotic assembly processes to deliver high quality cases consistently. The outcome is our Advanced Case Solutions, your guarantee that every aspect of protecting your components and equipment is built right in. We supplement our primary case manufacturing plants with 8 regional facilities known as Advanced Case Centers.

## METAL AND FOAM PROTECTION

Metal decks or cradles are used to secure heavy equipment, and elastomeric shock mounts isolate the metal fixture from the case shell.



Shock absorbing foam is custom fit to your component, and a variety of densities and material compositions are available. Precise kitting of aircraft parts and tools can mitigate foreign object damage (FOD). O-ring gaskets, forklift pockets, pressure relief valves and heavy duty spring loaded handles are other custom options that make a Peli-Hardigg™ case

much more than a box. And our best-in-class quality inspection and continuous improvement programs guarantee that the last case is the same high quality as the first.

## ELECTRONIC INTERFACE

Installing your electronic controls in a Peli-Hardigg™ case enables their use in any environment. Waterproof panel frames allow mounting an electronics dashboard, and various bulkhead connectors allow electronic connection even with the lid closed.



Ultra fragile electronic equipment can be transported safely in Peli-Hardigg™ mil-spec double end rackmount cases. With optional slide out frames and access from both ends. Rackmount cases enable fragile electronics to be deployed in any environment.



Advanced Case Solutions take the guess work out of the equation.



### CERTIFICATIONS\* AND APPROVALS:

IP67:  
Water resistance and dust ingress

AIR TRANSPORT ASSOC.:  
Spec 300 Category 1

MIL-Std 810, Def Stan 81 41 Level J  
Test reports available to certify military standards

\*actual approvals vary by case design

**A** Elastomeric Shock Mounts

**B** Velcro Lock Down Straps

**C** Metal Cradle

**D** Reinforced Corners

**E** Precision Routed Foam

**F** Comfort Grip Handles

**G** Tie Down Rings

**H** Stainless Steel Latches

**I** Skid Runners

**J** Purge Valves

**K** Strengthening Ribs

# SOLUTIONS DELIVERED: CASE BY CASE

OVER 50 YEARS OF EXTREME APPLICATIONS HAVE FORGED OUR TECHNICAL EXPERTISE



## UNMANNED AIRCRAFT VEHICLE



## AIRCRAFT CANOPY DECK



## AIR TO AIR REFUELING POD



## C130 PROPELLER EXCHANGE KIT



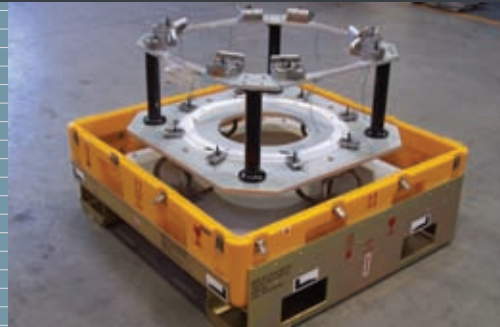
## METAL CRADLE



## AIRCRAFT TEST TOOL KIT



## PORTABLE MECHANICS TOOL KIT

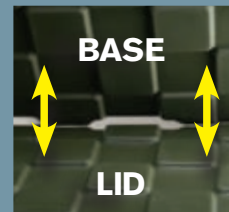


## ENGINE COMPRESSOR MODULE

# THE ISP<sup>2</sup> CASES WITH INTER-STACKING PATTERN: STACK WITH AUTHORITY

## IF IT'S GOT TO GET THROUGH, IT'S GOT TO BE IN A PELI-HARDIGG™ ISP<sup>2</sup> CASE

Shifting loose cargo can slow down your operations and threaten the mission with damaged freight. The new ISP<sup>2</sup> Cases from Peli virtually eliminate load movement with a unique Inter-Stacking Pattern (ISP). The system is compatible across 64 different case sizes, from 0,018 to 0,576 cubic metres of storage.



## BUILDING THE PERFECT LOAD

The system is designed to maximize the volume of standard logistics platforms. Whether loading Euro pallets, NATO pallets, 463L Master pallets or sea containers, the ISP<sup>2</sup> Case system will make the most efficient use of cargo space. With its Inter-Stacking Pattern, ISP<sup>2</sup> Cases can be cubed out as a solid block. The 10x10cm squared pattern bottom matches with the cube pattern on the case below, literally falling and locking into place.



Cross-stacking builds incredibly tight loads that can save time with strapping or netting. This allows taller loads that won't shift or become loose from turbulent air, high seas or dilapidated road conditions. In a word, the ISP<sup>2</sup> Case system is bomb-proof transport.

## ONLY THE STRONG SURVIVE

Peli is the largest manufacturer of shipping containers in the world, so we know how to do it right. The ISP<sup>2</sup> Case material is a proprietary polyethylene formula that achieves the optimum balance of lightweight, panel rigidity and durability. Rotational-moulding provides between 15% to 20% more material in the corners and edges of the case, resulting in more strength where it is needed. Every detail speaks to our 50 years of experience, from columnar ribs that withstand huge stacking loads to recessed hardware that "hide" from damage. Look even closer and you'll find metal reinforcements on hardware attachment points, positive anti-shear locks that keep the lid and base aligned during impact, and a tongue and groove

seal with a silicone sponge O-ring to keep dust and moisture out. Even the Pressure Relief Valve is smart, allowing excess air pressure to escape and preventing vacuum lock from altitude change.

## MADE IN EUROPE

The ISP<sup>2</sup> Cases are manufactured in Europe according to the most restrictive standards and this allows a closer connection with local markets. With our two Advanced Case Centres in Ashford (United Kingdom) and Paris (France), Peli-Hardigg™ offers customisation services allowing many of our customers to be directly involved in the design and testing of first article samples.



Some ISP<sup>2</sup> Cases can have forklift provisions as an option.



## > ISP<sup>2</sup> CASE FEATURES



**MOULDED-IN STACKING RIBS**  
Secure Non-Slip Stacking on Matched Size Cases

**COMFORT GRIP HANDLES**  
A Peli-Hardigg™ Patented Feature, Heavy-Duty, Spring Loaded to Lay Flat

**PATENTED MOULDED-IN METAL INSERTS**  
Catch and Hinge Attachment Points, Designed to Distribute Load to Case Walls

**RECESSED HARDWARE**  
Hardware Protected from Impact Snag Free Transport (not shown)

**DOUBLE WALLED RIM FOR TONGUE-IN-GROOVE SEAL**  
Remains Sealed After Impact Splash and Rain Resistant Air and Watertight Options

**POSITIVE ANTI-SHEAR LOCKS**  
Prevent Lid Separation Upon Impact Minimize Hardware Stress

**REINFORCED CORNERS AND EDGES**  
15% to 20% Thicker Corners and Edges for Added Impact Protection

**CARD HOLDER**  
For tracking and identifying case contents

**CERTIFICATIONS\*  
AND APPROVALS\*:**  
STANAG 4340  
Def Stan 81-41 Level J  
ATA300

\*Note: The ISP<sup>2</sup> Cases meet part or all of these shipping and packaging standards and specifications depending on the application.