



Shipping Test & Measuring Equipment

Background: Essco handles thousands of pieces of shipped equipment every year and a percentage arrives damaged. While some are the fault of the carrier, poor packaging causes most damage. Our shipping department has compiled guidelines below to help our customers safely ship test and measuring equipment.

- **Foam Packaging:** These systems (ex: Instapak) are two-part dispensing systems that make a custom fit foam frame around the equipment. They are ideally suited for electronic equipment. Caution should be used with some dimensional equipment and tools, as the method tends to trap some moisture in the container that may hasten corrosion. The box size should be selected to provide two to three inches of foam around the unit on all sides, with four to five inches for items in excess of 70 pounds.
- **Bubble Wrap:** This can be used for any item, using two to three inches wrapped about the instrument or four to five for heavier items. Make sure you wrap the equipment securely, as loose bubble wrap will shift and expose the equipment to impact.
- **Plastic wrap:** This wrap does little more than keep dirt off equipment and provides no physical protection. It also poses an ESD hazard. Electronic equipment board elements or other ESDS devices should have proper ESD protection applied first before packaging for travel. Neither foam, plastic nor bubble wrap should be used on polished measuring surfaces (i.e. angle blocks, sine blocks, etc.)
- **Peanuts:** Foam or biodegradable “peanuts” are useful as filler when used with equipment already in its protective case. Peanuts alone will shift during shipment and expose your equipment to damage. If the protective case is not available, bubble wrapping the instrument will suffice.
- **Paper:** Paper should only be used as filler for lighter instrument that can take some impact. When used with heavier equipment, they compress and shift easily.
- **Voids:** Regardless of the material selected, there should be no voids in the box. Voids allow movement of the instrument within the box that will cause damage.
- **Box materials:** A good quality cardboard box should suffice for most shipments as long as they are packed properly. Exceptions should be noted for large tool collections where the cardboard cannot handle the combined weight or equipment that should be on a pallet but is not. Wooden crates, with sufficient padding, would serve well.
- **Multiple items:** If you are going to put multiple items in a single container, ensure that the items are sufficiently padded from each other. Also give consideration to the weight of the item and the size. Heavy instruments will crush or damage lighter ones regardless of the carrier and small instrument could be thrown out with the packing if not made noticeable.
- **Protective Containers:** These containers can protect the equipment only if they remain shut. Tape or bind wood, plastic or metal containers (and drawers) prior to packaging. Many of the latches on these cases are inadequate for travel and many pins and blocks have been lost or damaged by boxes opening in transit.

We have a remarkable collection of photographs of damaged and broken equipment that has arrived at our laboratory. We hope that these guidelines will help reduce our collection and keep your equipment off the repair bench.

You Armour

Essco Calibration Laboratory Shipping Department