



Secure shipping for temperature- and humidity-sensitive capital equipment

Transporting capital equipment safely and on schedule from Zurich, Switzerland to San Francisco, USA, is no small feat. Here's how our experts used an end-to-end solution to get the job done.

Case study

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Customer: A semiconductor equipment manufacturer

Challenges:

- **Highly sensitive cargo:** Capital equipment tools to be shipped from Europe to the US
- **Continuous protection:** Safeguard the shipment from shock, tilting and temperature or humidity changes.
- **Time sensitivity:** The shipment was highly time-sensitive, necessitating a direct flight with active monitoring

Solution: Supported by SemiconChain logistics excellence



Scope of work

Our client needed their delicate and expensive shipment moved from Zurich to San Francisco in a timely manner with exclusive capacity. Because changes in temperature and humidity can leave semiconductor capital equipment susceptible to risk, Kuehne+Nagel entered the picture with an industry-leading logistics solution. We adhered to strict SemiconChain processes that address climate control requirements and ensure intact and on-time arrival.

- Shipping equipment in certified air cargo ULD Envirotainer RKN e1 containers equipped with electric heating and compressor cooling functionality
- A Kuehne+Nagel semicon-approved temperature-controlled air ride truck transported the cargo to and from the air carrier's facility (departure and destination points)
- Routing was chosen with an approved semicon air carrier, Swiss International Airlines
- Arranged a direct flight from origin to destination
- Origin team handled the following:
 - Inspected the container to ensure it was fully charged and the shock watch and tilt indicators were in good condition
 - Verified temperature and humidity based on the client and product requirements before handing over to the approved air carrier
 - Supervised container buildup on airline ULD
- Upon arrival at San Francisco airport, destination team handled the following:
 - Inspected the container for any non-conformities
 - Inspected and confirmed that the shock watch and tilt indicators were not activated
 - Reverified container temperature and humidity set points
 - Checked container battery level and recharged (when needed) before loading onto climate-controlled air ride trailer for final mile delivery
- Kuehne+Nagel digital checklists completed for all transit points, and pictures taken

- Trained specialists supervised loading and unloading
- Checklists and pictures uploaded via digital app to the myKN visibility site
- Provided milestone monitoring and shipment status updates via myKN

Results

Following industry best practices and SemiconChain standards, the shipment was professionally handled and monitored at every stage. We ensured that our client's temperature- and humidity-sensitive capital equipment tools arrived on schedule and in perfect condition by:

- Providing quality-based shipping solutions
- Using our network of semicon-approved, temperature-controlled transportation
- Delivering delicate semicon tools and equipment promptly and safely

The comprehensive strategy meant our customer's goods crossed the globe without a hitch and arrived as promised. Ultimately, this is another demonstrable example of our capability to deliver unparalleled semiconductor logistics.

Are you looking for secure semiconductor shipping that safeguards the integrity of your goods?

→ Find out more about Kuehne+Nagel's SemiconChain-certified solutions.

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Ensuring the integrity of temperature-sensitive semiconductor equipment, step-by-step:

