

**engineering** innovations  
worldwide



## **Manipulators + Carts** Collection

**esmo**  
semicon

# esmo semicon manipulators, carts, and test floor equipment – top cost | performance ratio for most reliable testing

All esmo semicon manipulator products come with standardized features for easy integration into all test floor environments, including engineering, wafer sort, and final test, with all test system and mating equipment types. Upon request, optional features are available for specific test cell and mating equipment requirements.

esmo design specialists can develop individual solutions for adapting and integrating test head manipulators and mechanical interfacing systems into test cells for front-end and back-end testing. Based on an extensive determination and definition of requirements in collaboration with the customer, esmo provides comprehensive services, from selecting suitable equipment to completely new designs, to create optimized and highly efficient test cells.

quick and easy test head installation

arm systems with left or right set-up options

official certifications ensuring first-class quality

active cable management for optimized handling

motorized or manual operation options for all motions

modular configurations catering to individual requirements

configurable for all test heads with minimized footprint

esmo force control system guarantees high-level safety for operators and equipment

## esmo's all in one service | packages

Specialized and experienced staff to provide excellent design and technical support.

Reduction of inadvertent damage to testing hardware caused by operating errors.

Smart design, high-quality production, state-of-the-art products, virtually maintenance-free.

Quick return on investment, reduced set-up times, increased test yields, and long-term value.

Exceptionally short design and lead times plus customized installation/training services.

ideal solutions tailored to meet your specific needs

## Universal Manipulators

### leto

universal test manipulator  
up to 90 kg / 198 lbs  
for prober and handler  
docking with lowest possible  
floor space



- large range of motion in relation to manipulator size
- easy motion for all linear and rotatable motions
- designed as per customer specifications
- several upgrades like rotation gear / keyboard and pc holder possible

lightweight  
tailor-made  
design

### pegasus

universal test manipulator  
up to 160 kg / 353 lbs  
for prober and handler docking



- easy motion for all linear and rotatable motions
- high range of motion in x / y-axes
- durable + robust design
- optimized footprint for various small test heads
- several linear- and rotate motions available
- several upgrades like keyboard and pc holder possible

small +  
convenient  
solution

### ikarus

universal test manipulator  
up to 300 kg / 661 lbs  
for prober and handler docking

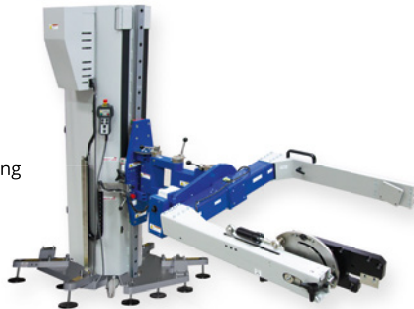


- easy motion for all linear and rotatable motions
- motor-assisted motion for z-axes + twist axes available
- different swing configurations possible
- different linear footings available
- durable + robust design
- optimized footprint for various test heads
- several linear- and rotate motions available
- several upgrades like rotation gear / keyboard and pc holder

bestselling  
manipulator

### kronos

universal test manipulator  
up to 400 kg / 882 lbs  
for prober and handler docking



- easy motion for all linear and rotatable motions
- motor-assisted motion for z-axes, twist axes + tumble axes available
- different linear footings available
- durable + robust design
- optimized footprint for various test heads
- several linear- and rotate motions available
- several upgrades like rotation gear / keyboard and pc holder possible

durable +  
robust design

### esMP4 plus

universal test Manipulator  
up to 450 kg / 992 lbs  
for prober and handler docking



- easy motion for all linear and rotatable motions
- motor-assisted motion for z-axes, twist axes and tumble axes available
- column rotation for maximum range of motion (90°-360°)
- durable + robust design
- optimized footprint for various test heads
- several linear- and rotate motions available
- several upgrades like rotation gear / keyboard and pc holder possible

easy motion  
easy handling

## Universal + Final Test Manipulators

### orion

universal test Manipulator  
up to 500 kg / 1102lbs  
for prober and handler docking



- various linear footings available
- motor-assisted motion for z-axes / x-axes and twist axes available
- different swing configurations possible
- durable + robust design
- several linear and rotate motions available
- several upgrades like keyboard and pc holder possible

multi-directional movings

### pallas

universal test manipulator  
up to 750 kg / 1651 lbs  
for prober and handler docking  
docking with  
lowest possible floor load



- no counterweight – floorload reduction up to 40%
- motorized motion for z-axes / x-axes and twist axes
- force feedback control ensuring operator safety + protecting equipment
- durable + robust design
- optimized footprint for various large test heads
- several linear- and rotate motions available
- several upgrades like keyboard and pc holder possible

next generation manipulator

### neptune evolution

hinge Manipulator  
up to 650 kg / 1433 lbs  
for prober docking



- with motorized motion for z-axes and hinge axes
- one button control for easy operation
- full automated work sequences + individual docking height settings
- password-protected control options for operator + docking modes
- durable + robust design
- several linear- and rotate motions available
- several upgrades like keyboard and pc holder possible

strong hinge with z-axis

### ares

final test manipulator up to  
180 kg / 397 lbs  
for handler  
docking with  
lowest possible floorload



- motorized motion for z-axes – no counterweight
- force feedback control ensuring operator safety + protecting equipment
- durable + robust design
- optimized footprint for various test heads
- several linear- and rotate motions available
- optional up to 250 kg / 551 lbs

docking with lowest possible floorload

### ares plus

final test manipulator  
up to 500 kg / 1102 lbs  
for handler  
docking with  
lowest possible floorload



- motorized motion for z-axes – no counterweight
- force feedback control ensuring operator safety + protecting equipment
- durable + robust design
- optimized footprint for various test heads
- several linear- and rotate motions available

docking with lowest possible floorload

ideal solutions tailored to meet your specific needs

### phoenix cart

final test cart up to  
250 kg / 551 lbs

for handler

docking with lowest possible  
floor space



- effective solution for DUT horizontal and vertical docking
- mobile design with manually driven z-axes
- floating test head mounting by automatic spring system
- several linear- and rotate motions available
- several upgrades like keyboard and pc holder possible

### eos cart

final test cart up to  
400 kg / 882 lbs

for handler

docking with minimum  
footprint requirement



- effective solution for DUT horizontal and vertical docking
- mobile design with manually/pneumatic/electric-driven z-axes
- high floating test head mounting by automatic spring system
- several rotate motions available
- several upgrades like keyboard and pc holder possible

### lupo cart

all-in-one for  
transport | installation | handling



- mobile and multi-functional lifting / handling unit
- effective handling / manually lifting solution for handler equipment
- quick and easy exchange of carrier assemblies

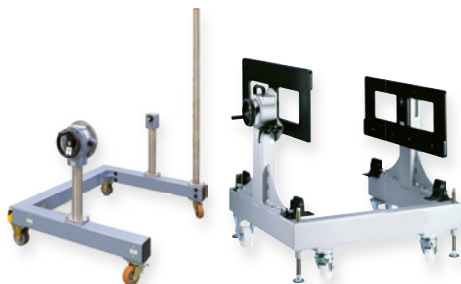
### aurora cart

all-in-one for  
transport | installation | handling



- wireless, battery powered motor-assisted motion for z-axes
- effective handling / lifting solution for Prober and test head equipment
- quick and easy exchange of carrier assemblies
- multifunctional grippers with quick change system available

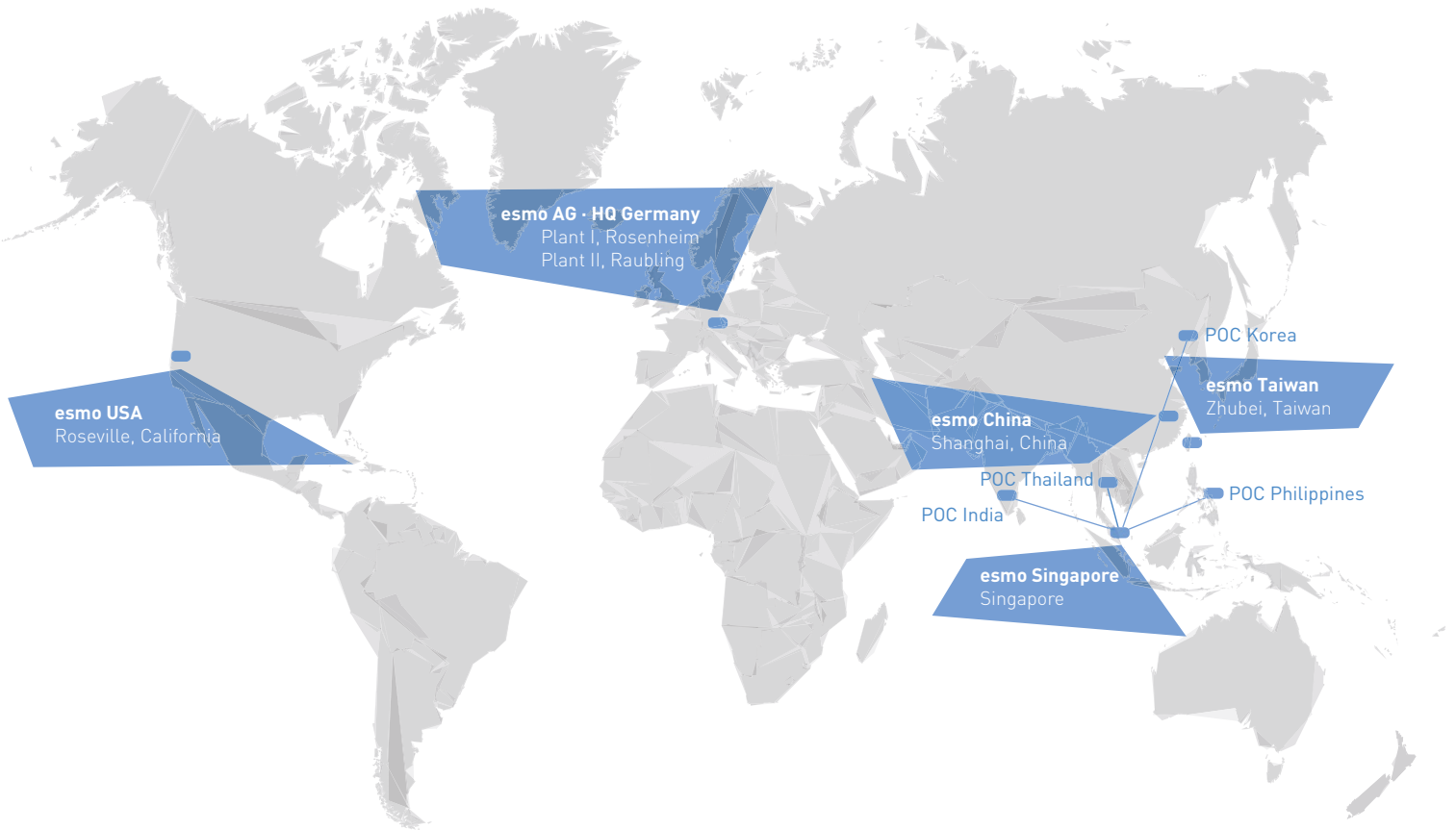
### engineering carts



- functional assembly + mobile cart for various test head types
- effective solution for engineering
- several upgrades like rotation gear / keyboard and pc holder possible

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