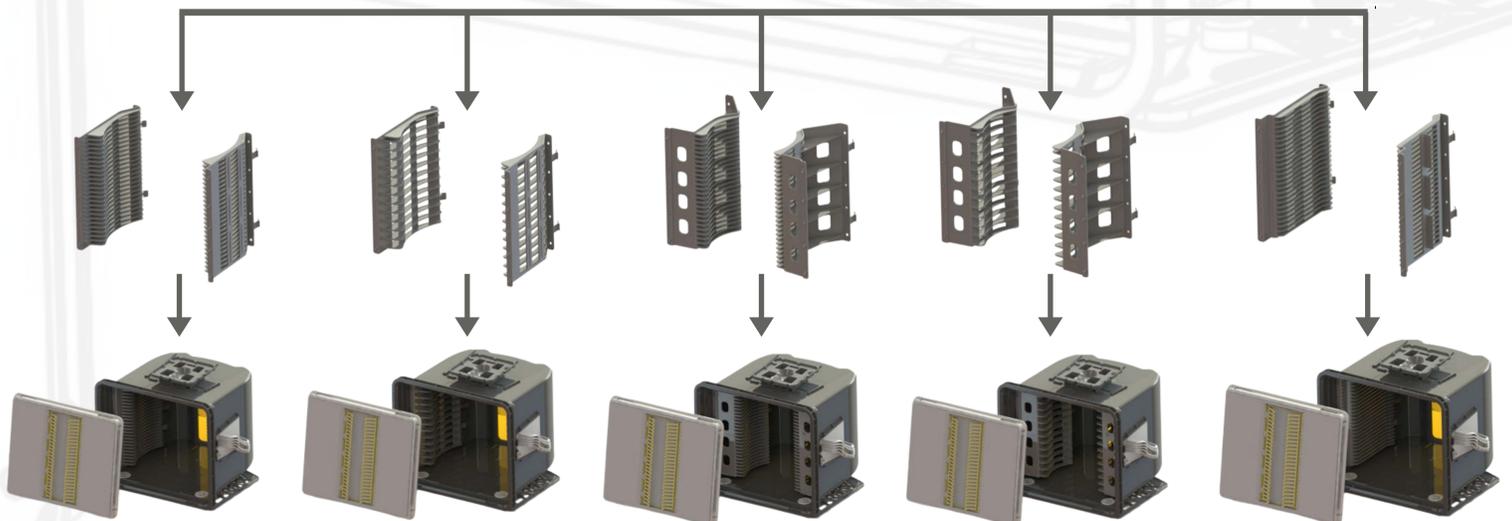




# eFOUP-C Modular System

A Configurable 300mm FOUP System  
for Multi-Format Media Handling



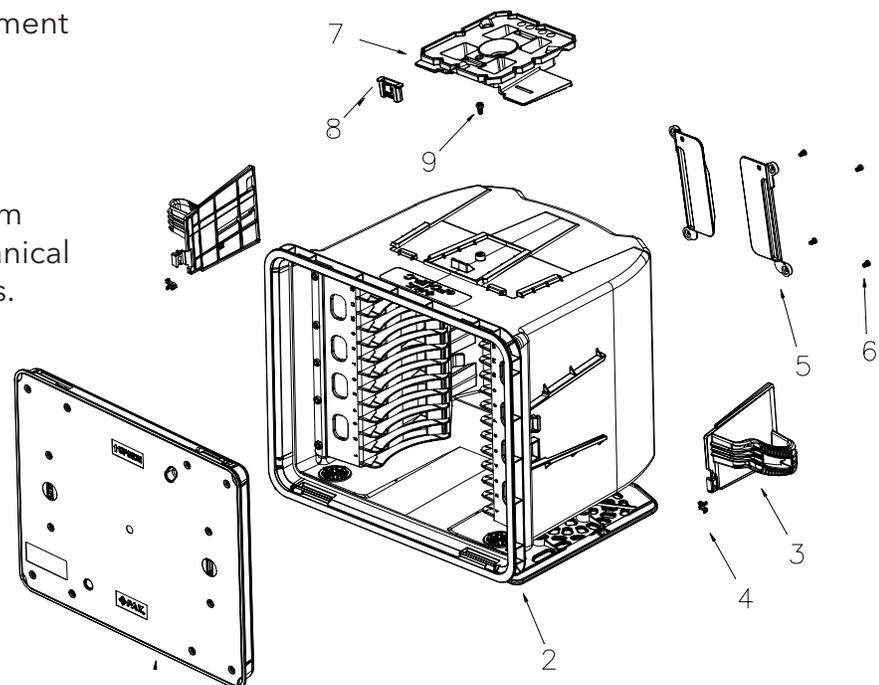
## Introduction

ePAK's eFOUP series is engineered to meet stringent fab requirements by combining robust wafer protection, automation compatibility, and contamination control. Built on a common design platform, all ePAK eFOUPs are fully compliant with applicable SEMI standards, compatible with Automated Material Handling Systems (AMHS), and utilize ultra-clean, ESD-safe materials.

From this foundation, the eFOUP300-C Modular Line addresses the need for multi-format wafer handling. This data sheet details the eFOUP300-C, a configurable system designed to unify wafer transport for fabs managing multiple substrate sizes—including 200mm wafers, 300mm wafers, and film frames—within a single 300mm-compatible FOUP footprint.

## Key Features

- Multi-Format Wafer Handling:** Engineered for versatility, the modular design is configurable for 200mm wafers, 300mm wafers (standard and thinned), and film frame carriers within a standard 300mm FOUP shell.
- Unified Automation on 300mm Platforms:** The modular system preserves the standard 300mm external dimensions and SEMI-compliant interfaces, ensuring full compatibility with existing AMHS equipment regardless of the internal wafer format.
- Specialized Thin Wafer Support:** Offers dedicated inserts with features such as extended side supports and wider 20mm slot spacing to minimize sag and mechanical stress for ultra-thin or warped substrates.
- Consolidated Carrier Inventory:** Enables a single FOUP platform for multiple wafer formats, reducing capital equipment costs and simplifying material handling logistics.
- Robust Construction:** Built with the same high-quality, low-outgassing materials as all ePAK eFOUPs, including PC+CF composites and PEEK, to ensure structural integrity and ESD safety.



## The eFOUP-C Modular System

The core of the eFOUP300-C is its system of application specific inserts. Each insert is precision-molded to adapt the standard shell for a specific wafer format, ensuring secure handling and correct alignment with automated equipment.

### Available Insert Configurations:

**eFOUP300-25:** 25-slot FOUP for 300mm wafers. Wide wafer supports for thinned wafers.

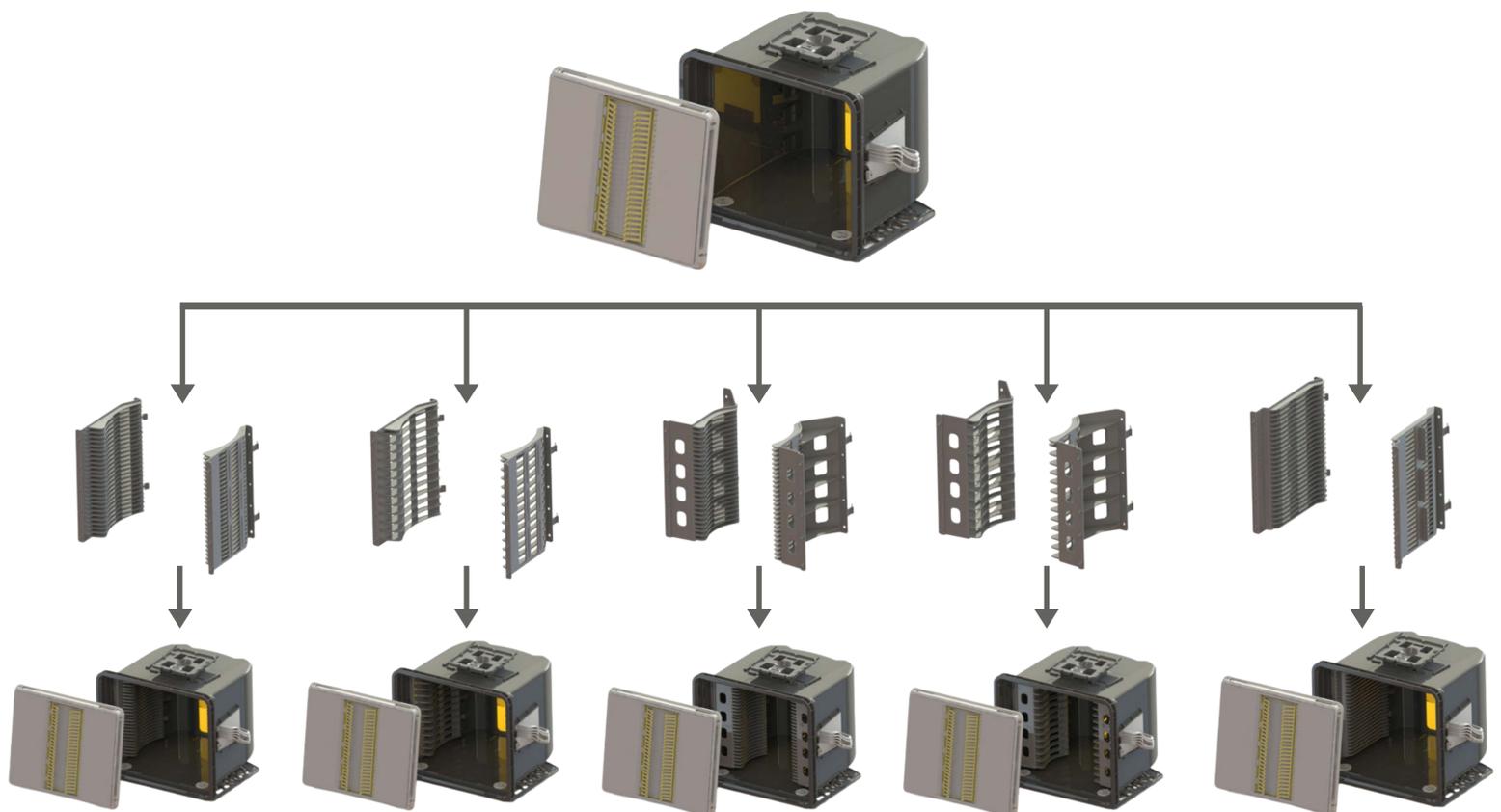
**eFOUP300-13:** 13-slot FOUP for 300mm wafers. Wide wafer supports for thinned wafers. 20mm pitch spacing for wafer sag or thick wafers/boules.

**eFOUP200-25:** 25-slot FOUP for 200mm wafers on a 300mm FOUP footprint. Allows use of 300mm automation and tools.

**eFOUP200-13:** 13-slot FOUP for 200mm wafers on a 300mm FOUP footprint. 20mm pitch spacing for wafer sag or thick wafers/boules.

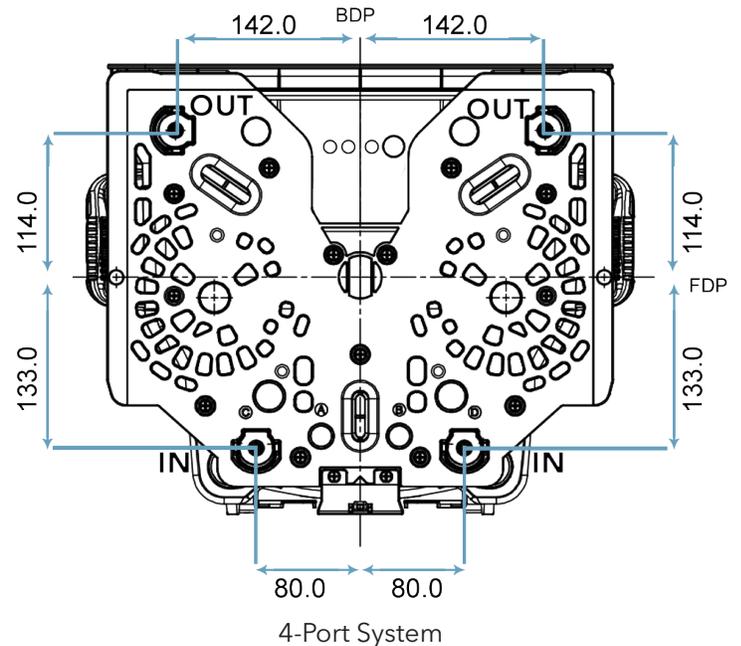
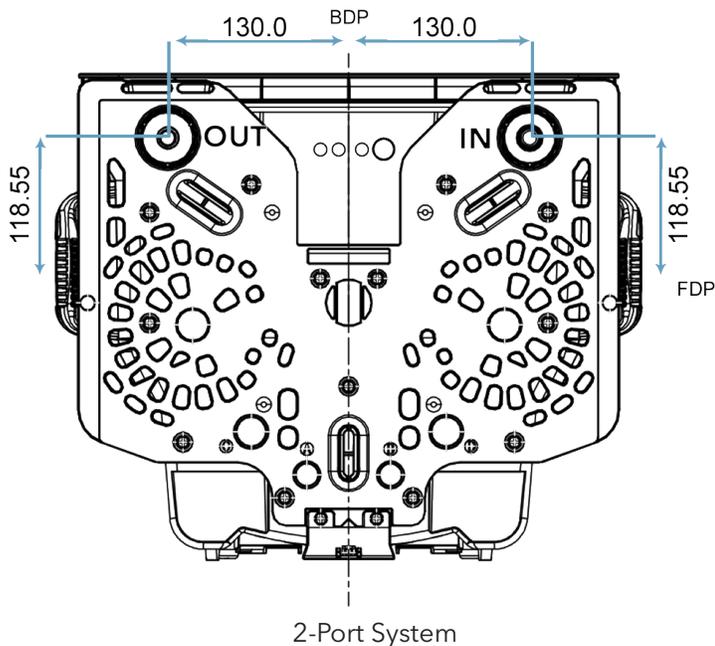
**eFOUP-FF276:** 25-slot FOUP for 276mm film frames, compatible with metal or plastic frames.

**eFOUP-C-PROBECARD:** Molded insert positions and secure the probe card during transport, preventing vibration or mechanical contact.



# Technical Specifications

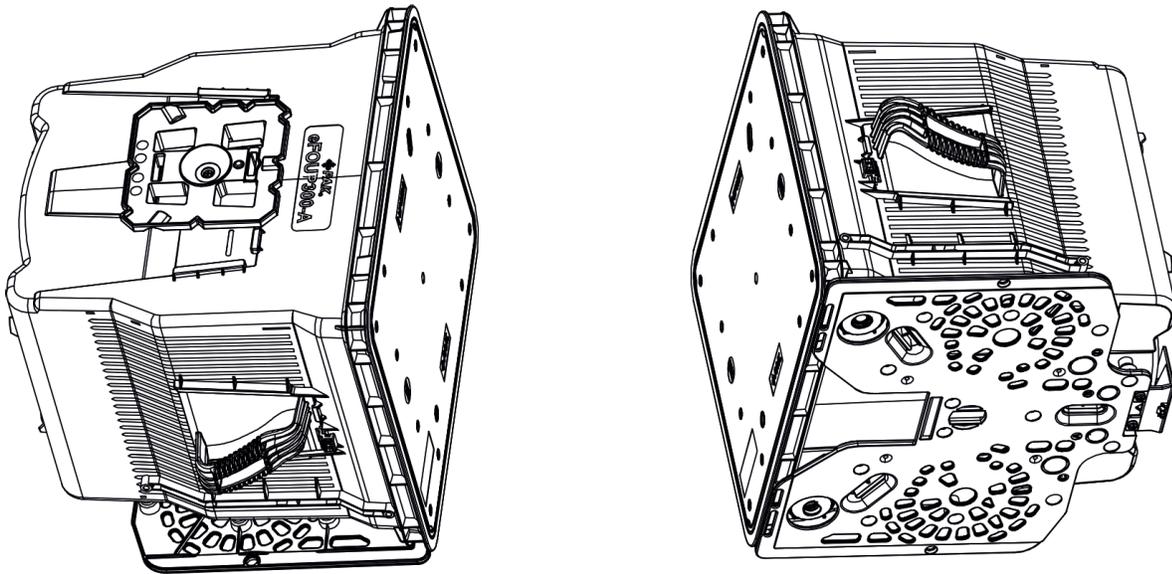
Feature	ePAK eFOUP200/300-C
Capacity	25 x 300mm Wafer, 13 x 300mm Wafer, 25 x 200mm Wafer, 13 x 200mm Wafer, 25 x 276mm Flex Frames
Slot Spacing	10mm & 20mm options
Dimensions (WxDxH)	420 x 342 x 338mm
Empty weight	~5.4 kg
Shell Material	Static Dissipative Carbon Fiber Polycarbonate
Door Material	Insulative Polycarbonate, PEEK
Wafer Contact Area Materials	Static Dissipative Carbon Fiber Polycarbonate, PEEK, and HDPE options
Purge Ports	2 Port & 4 Port options



## Automation Compliance

ePAK eFOUPs are engineered for seamless integration into advanced semiconductor manufacturing environments, ensuring high throughput and reliable wafer handling. Our FOUPs are fully compliant with industry-leading SEMI standards, facilitating broad interoperability with existing fab infrastructure.

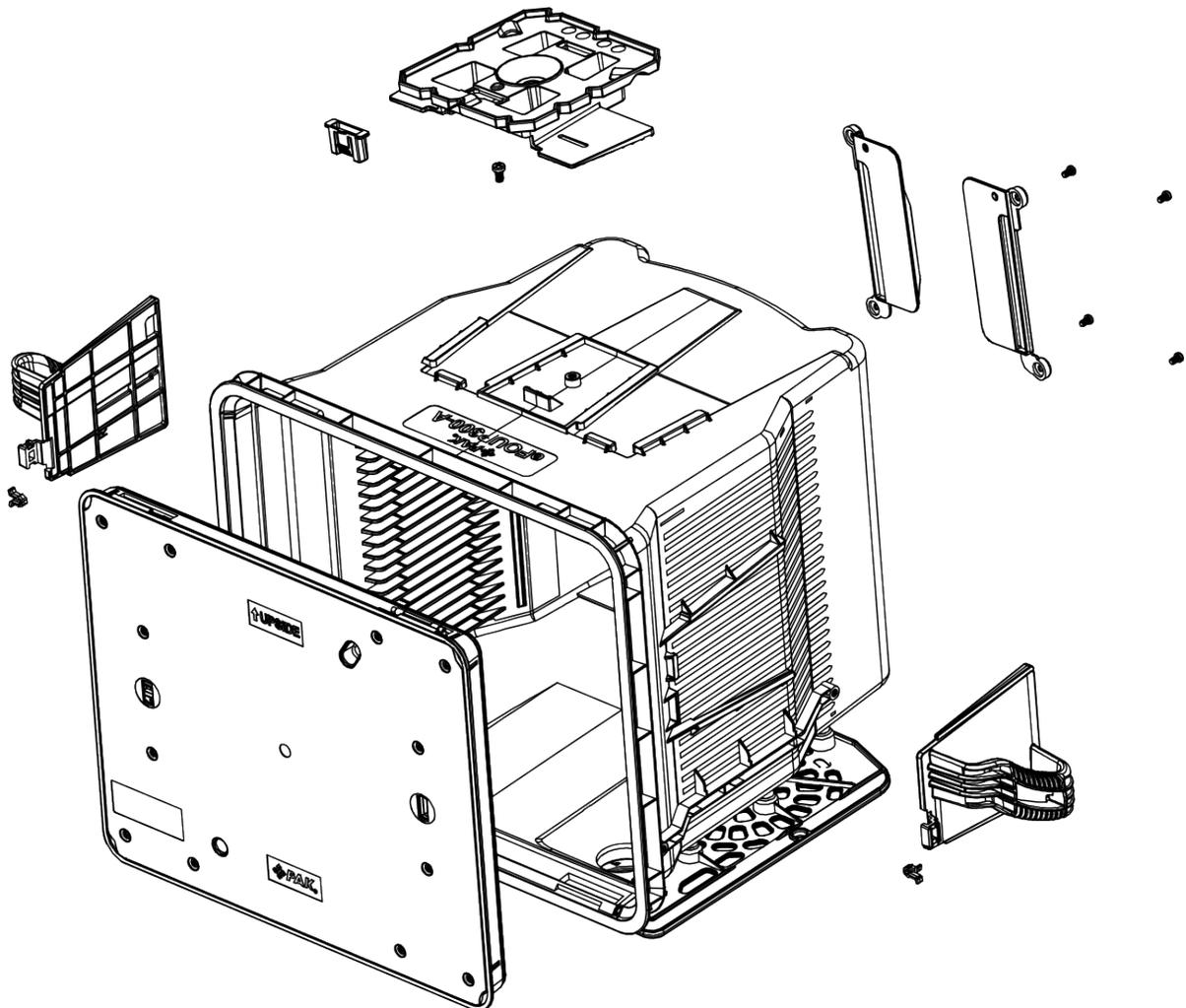
Key aspects of their automation compatibility include:



- SEMI/FIMS Interface:** Full compliance with the SEMI E62 (FOUP Mechanical Interface) and SEMI E47.1 (FOUP Identification and Tracking) standards ensures robust mechanical and communication interfaces with automated material handling systems (AMHS) and process tools.
- Kinematic Coupling:** Designed with precision kinematic coupling features to ensure accurate and repeatable placement on load ports, minimizing particle generation and maximizing transfer efficiency.
- AMHS Integration:** Optimized for compatibility with a wide range of Automated Material Handling Systems, including overhead hoists (OHT), automated guided vehicles (AGV), and stockers, streamlining wafer transport throughout the fab.
- Robotic Flange:** Equipped with a standardized robotic flange for secure and efficient gripping by AMHS robots, enabling automated loading and unloading without manual intervention.

## Configuration options

Component	Available Options	Purpose and Application
<b>Handles</b>	White, Red, Green, Blue, Black	Visual identification for specific process flows or wafer types.
<b>Card Holders</b>	Clear, Opaque White	Holds physical lot information cards for manual tracking.
<b>Information Tags</b>	Color and marking options available	For permanent or temporary visual ID (barcodes, etc.).
<b>RFID Integration</b>	Horizontal or Vertical holder styles	Enables fully automated, non-line-of-sight tracking via MES.
<b>Rear Window</b>	Amber Transparent, Clear, ESD Opaque	Provides UV protection or allows for clear visual inspection.





## Additional Information

Visit [www.epak.com](http://www.epak.com) for specifications, compliance documentation, and technical support.

## Ordering Details

For part numbers and purchase inquiries, please contact ePAK International, Inc.

[sales\\_us@epak.com](mailto:sales_us@epak.com)

+1 512 231 8083

[epak.com](http://epak.com)