Vacuum Cassette Load Ports
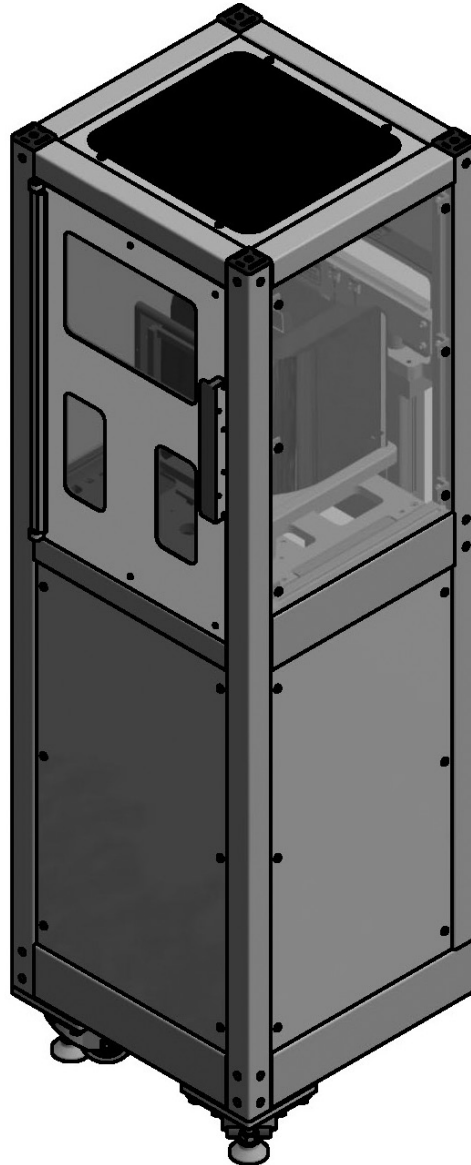*Robotic Components*

ALP-200 Cassette Load Ports
Robotic Components

FEATURES
- Hine Robotics: HAtm-5.0 Atmospheric Elevator
- High reliability of > 3 million MCBF
- Handles wafer sizes up to 200mm
- Sophisticated automation features including wafer mapping, wafer cross-slot detection
- Safety interlocks
- Atmospheric compatibility
- RS-232 / Ethernet control interface
- Valve door

OPTIONS
- 25 or 50 wafer cassettes
- Cassette cradles

ALP-200

The ALP-200 is a atmospheric load lock designed to transfer semiconductor substrates loaded in a cassette and become an advanced factory interface that links the wafer fabrication environment with the OEM cluster system. It features one atmospheric elevator, the HAtm-50, advanced material sensors, and safety interlocks. The ALP-200 includes sophisticated automation features such as wafer mapping and wafer cross-slot detection. The ALP-200 can interface with a wide variety of cluster systems and can be customized to fit your unique needs.
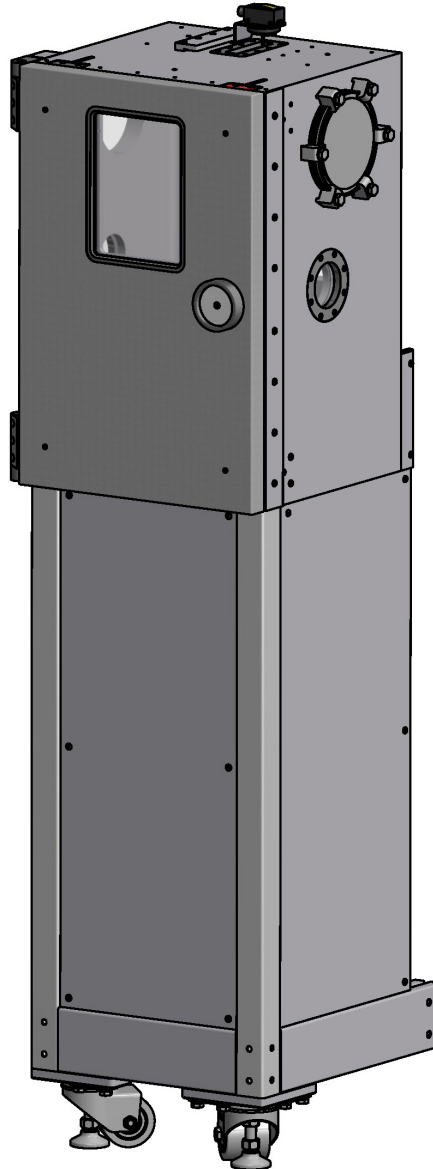
CLP-200 Cassette Load Ports
Robotic Components

FEATURES
- Hine Robotics: HA-50V Vacuum Elevator
- High reliability of > 3 million MCBF
- Handles wafer sizes up to 200mm
- Sophisticated automation features including wafer mapping, wafer cross-slot detection
- Safety interlocks
- High vacuum compatibility
- RS-232 / Ethernet control interface

OPTIONS
- High vacuum configuration
- 25 or 50 wafer cassettes
- Cassette cradles
- Slit valve

CLP-200

The CLP-200 is a vacuum load lock designed to transfer semiconductor substrates loaded in a cassette and become an advanced factory interface that links the wafer fabrication environment with the OEM cluster system. It features one vacuum elevator, the HA-50V, advanced material sensors, and safety interlocks. The CLP-200 includes sophisticated automation features such as wafer mapping and wafer cross-slot detection. The CLP-200 can interface with a wide variety of cluster systems and can be customized to fit your unique needs.
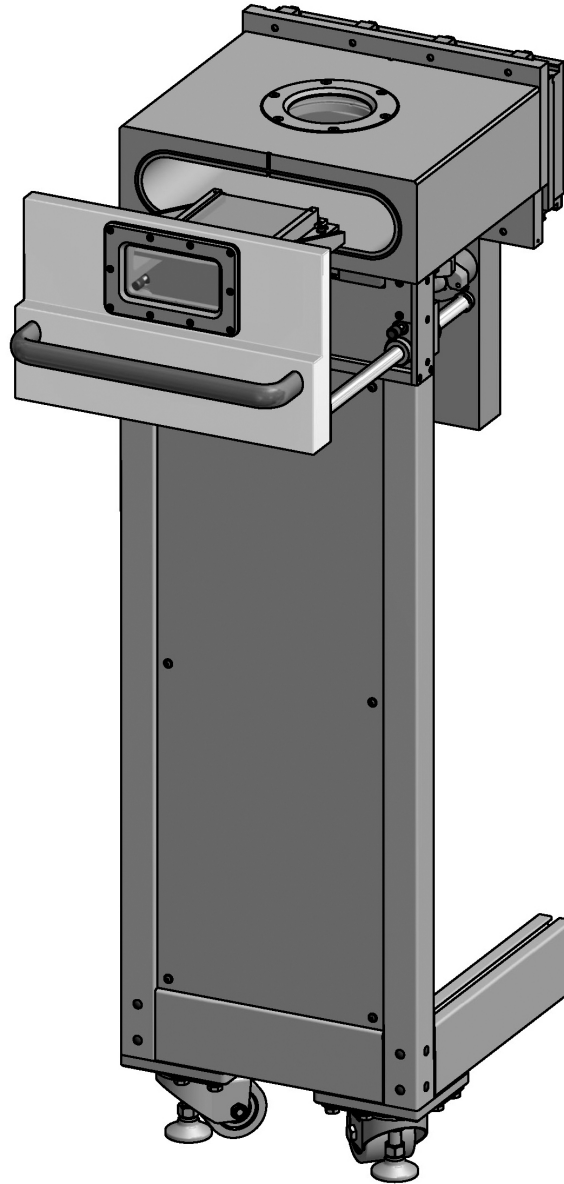
MLP-200 Mini Load Ports
Robotic Components

FEATURES
- High reliability of > 3 million MCBF
- Handles wafer sizes up to 200mm
- Safety interlocks
- High vacuum compatibility
- RS-232 / Ethernet control interface

OPTIONS
- Vacuum gas plumbing
- 1 to 4 wafer cassettes
- Slit valve

MLP-200

The MLP-200 is an entry-level vacuum load lock designed to transfer semiconductor substrates loaded in a cassette. As the CLP-200, the MLP-200 acts as a factory interface between the user and Constellation system cluster platform. It features safety interlocks and a cassette that can accommodate up to 4-substrates. Unlike most vacuum load locks, the MLP-200 does not require a vacuum elevator. Thanks to its versatile, compact and economical design, the MLP-200 is the most suitable factory interface solution for R&D environments.

Vacuum Cassette Load Ports
Robotic Components

	ALP-200	CLP-200	MLP-200
Wafer Sizes	≤200mm*		
Pay Load	34 Kg†		
Axis of motion	Z	Z	N/A
Transfer Height	1100mm		
High Vacuum Configuration	N/A	Available	

Vacuum performance
    Base operating pressure
    Leak Rate
	N/A
	N/A
		<5.00E-06 Torr
		1.00E-09 scc He/sec
			<5.00E-06 Torr
			1.00E-09 scc He/sec

Input Power	24VDC @ 5 Amps		
Cassette type	SEMI Standard Cassettes (≤200mm)		Custom 4 wafer cassette
Materials Exposed	6061-T6 Aluminum, Stainless Steel 300 and 400 Series, Viton, Borosilicate Glass		
Mounting	200mm MESC Slit Valve Support Frame as Required		
Max. Operating Temperature	100°C		
Repeatability Vertical Travel	0.10mm **		N/A
Speed Vertical Travel	185mm		N/A
Cassette Mapping time	10 seconds		N/A
MTBF	>3.00E+06		N/A

* Hine Automation offers cassette cradle for SEMI standard sizes up to 200mm. Other sizes are available upon request.
† Payload with standard configuration
** Measured as three standard deviations (3σ)

About Hine Automation

Hine Automation, LLC is a designer and manufacturer of automation systems and robotic components. We serve Original Equipment Manufacturers (OEMs) in the semiconductor, solar, flat panel display and related industries across the globe. Our robotic components satisfy a wide range of needs; from flexible research and development environments to stringent manufacturing environments. Combining our unsurpassed quality and reliability with modular and versatile designs to meet today's automation challenges, our products provide functional and economical solutions.

Our Mission

Our goal is to design and manufacture the most cost effective automation solutions and deliver unparalleled customer service and support.

Our Strengths

- Demonstrated Reliability
- Cost Effective Solutions
- Custom Solutions
- Lightning Speed Response and Turn-around Times
- Knowledge, Experience-driven Designs

Our Products

- **Cluster Systems:**
  Constellation Systems

- **Automated Load Locks:**
  Star Systems

- **Robotic Components:**
  Vacuum Robotic Arms
  Vacuum Elevators
  Vacuum Aligners
  Atmospheric Robotic Arms
  Atmospheric Elevators
  Atmospheric Aligners

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