

FACTORY AUTOMATION

FA Systems Product Lineup



FOUP Load Port

Load Port TAS300

High-performance module that meet your needs for particle-free operation, high throughput and high durability of continual motion

Features

- All moving parts are arranged under the wafer surface and the thorough airflow analysis achieves a particle-free at the highest level in the world.
- The air-cushioned pneumatic drive on docking plate and FIMS door opening provide calibration-free operation, with a wide variety of FOUPs. (Supports 300mm FOUPs compliant with SEMI E47.1 and E62)
- Mapping unit is optionally available.

Specifications

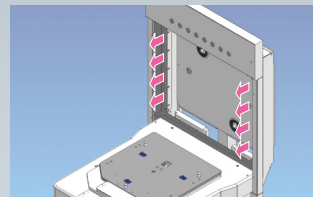
SupportedFOUPs	300mm FOUPs compliant with SEMI E47.1, E62	
FOUP door lock	Vacuum suction	
Detection functions	FOUP presence /FOUP correct placement / Prevention of pinching of obstacle/ Wafer protrusion detection	
Operation time	FOUP opening and closing :28sec(With mapping)	
Utilities	Power source	DC24V±5% 3A (Full load current:2A) Circuit breaker rating:50A
	Dry air	0.52~0.6MPa 30L/min(ANR) Connection: φ6mm tube
	Vacuum	-61±10kPa 10L/min(ANR) Connection: φ6mm tube



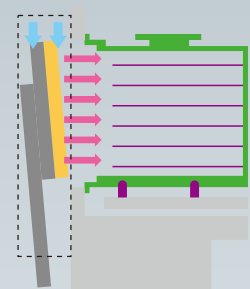
Load Port Purge Application

Two types of purge functions are selectable.

TAS-FP



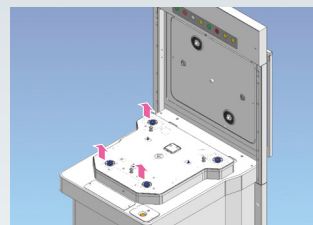
Open FOUP door and inject N2 gas or dry air into FOUP



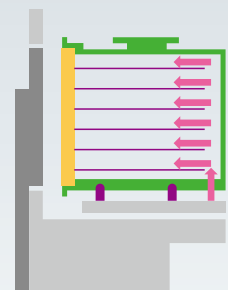
Features

- 300mm FOUP complying with SEMI Standard E47.1 and E62 is applicable regardless of with/without of the bottom purge port.

TAS-BP



Inject N2 gas or dry air from the bottom purge port into FOUP



Features

- FOUP with the bottom purge port is applicable.

Purge Application

CAVS-FE

Stand-alone equipment that rapidly substitutes inside of FOUP or FOSB with N2 gas

Features

- Applicable to FOUP and FOSB that comply with SEMI standard by using FOUP front purge system
- Compliant with Fab-online (GEM300) and SEMI E84

Specifications

SupportedFOUPs	300mm FOUPs compliant with SEMI E47.1, E62	
Purge gas	N2, Clean Dry Air Max. flow: 200L/min	
Utilities	Power supply	Single-phase AC100-240V 2A
	Air(For driving)	$\geq 0.52\text{MPa}$ $\geq 30\text{L}/\text{min}(\text{ANR})$ Connection: $\phi 6\text{mm}$ tube
	Vacuum	$-61\pm 10\text{kPa}$ $\geq 40\text{L}/\text{min}$ Connection: $\phi 6\text{mm}$ tube
	Purge gas	$\geq 0.5\text{MPa}$ $\geq 200\text{L}/\text{min}(\text{ANR})$ Connection: $\phi 3/8\text{inch}$ tube
	Clean Dry Air (Chamber cleaning)	$\geq 0.52\text{MPa}$ Connection: $\phi 3/8\text{inch}$ tube
	Exhaust	200~400L/min Connection: $\phi 50\text{mm}$ flange for duct connection



CAVS-NE

Sealed Load Ports are used in TDK advance full sealed Nitrogen EFEM.

Features

- Wafers are never exposed to atmosphere between FOUP and process tool.
- Low Oxygen and humidity condition, to minimize oxidation defects at all wafer transportation processes.
- A large reduction in N2 gas consumption by TDK Self-Circulating purge system.

Specifications

SupportedFOUPs	FOUP300EX (Shin-etsu Polymer) , SPECTRA (Entegris)	
Purge gas	N2 Max. flowrate: 300L/min	
Utilities	Power supply	Single-phase AC200V $\pm 10\%$ Max.32.5A
	Air(For driving)	0.52~0.6MPa $\geq 120\text{L}/\text{min}(\text{ANR})$ Connection: $\phi 6\text{mm}$ tube
	Vacuum	$-61\pm 10\text{kPa}$ $\geq 40\text{L}/\text{min}$ Connection: $\phi 6\text{mm}$ tube
	N2 gas	0.52~0.7MPa $\geq 300\text{L}/\text{min}$ Connection: $\phi 1/2\text{inch}$ tube
	N2 Purity	$\geq 99.999\%$
	Clean Dry Air (Exposure to air)	0.52~0.7MPa $\geq 300\text{L}/\text{min}$ Connection: $\phi 10\text{mm}$ tube
	Exhaust	$\geq 300\text{L}/\text{min}$ Connection: $\phi 100\text{mm}$ flange for duct connection
	Interface	Please consult about communication with process tool



Flip-chip Mounting System

High Precision Bonder AFM-15

Puesue for both high-productivity and high-reliable

Features

- Flexible design for the various process (Ultrasonic · Thermosonic · C4 · Thermal Compression · Eutectic · Transfer etc.)
- Process and machine proposal based on the sufficient experiences

Specifications

Type	1505	1506	1562	
Method	Face Down Flip Chip Bonding (Option : Face Up / High Precision Mounting)			
Bonding Process	Ultrasonic · Thermosonic · C4 · Thermal Compression · Eutectic · Transfer etc.			
Products	Devices (Various LED · LD · CMOS Sensor · TCXO · SAW · Opto · RF Module etc.) Package & Panel (Driver Chip · FOWLFP/FI/WLP etc.)			
Mounting Tact Time	MAX: 0.78sec/chip (Including 0.2sec process time)	MAX: 0.72sec/chip (Including 0.2sec process time)	MAX: 1.35sec/chip (Including 0.4sec process time)	
Accuracy	±7µm/3σ (Option ±5µm, ±3µm)		±5µm/3σ (Option ±3µm)	
Max Load	25N (Option 50N, 100N, 200N, 500N)		50N (Option 100N, 200N, 500N)	
Chip	Size	MAX: 2.5W × 2.5D × 1.0T mm MIN: 0.3W × 0.3D × 0.1T mm (Option MAX: 20.0W × 20.0D mm)	MAX: 7.0W × 7.0D × 1.0T mm MIN: 2.5W × 2.5D × 0.1T mm (Option MAX: 20.0W × 20.0D mm)	
	Supply	5, 6, 8, 12 Inch Wafer, Tray etc. (Wafer magazine auto loading)	5, 6 inch wafer, Tray etc. (Wafer ring semi auto loading)	8, 12inch wafer etc. (Wafer magazine auto loading)
Substrate	Size	MAX: 180W × 120D × 3.0T mm MIN: 50W × 50D × 0.3T mm (Option MAX: 8inch wafer)	MAX: 170W × 105D × 3.0Tmm MIN: 50W × 50D × 0.3Tmm	MAX: 180W × 120D × 3.0Tmm MIN: 50W × 50D × 0.3Tmm (Option MAX: 12inch wafer)
	Supply	Substrate · Package Tray · Wafer Tray etc.		
Machine	Size	1,200W × 1,504D × 1,650H mm	980W × 1,040D × 1,860Hmm	1,980W × 1,620D × 1,566Hmm
	Weight	approx. 1,800kg	approx. 1,500kg	approx. 2,100kg
Utility	Power	AC200V or AC220V 3phase 50/60Hz 30A		
	Compressed Air	Pressure : 0.5Mpa Consumption : approx. 30NL/min Connection : R 1/4 or Joint for 10mm tube		
	Vacuum	-80kPa or more		



High Precision Dispenser MDM-50

Available to built-in
the best type of head for
usage and purpose

Features

- High Accuracy · Small & Stable Volume Dispensing

Specifications

Method	① Mechanical ② Air Pulse ③ Air (Twin-Air) ④ Jet ⑤ Jet (Piezo)	
Process	Various Dispensing	
Products	Various Devices · Module · Panel etc.	
Dispensing Speed	MAX: 0.15sec/shot (Depended on materials · dispensing process)	
Accuracy	±5µm/3σ	
Number of Heads	MAX: 4	
Substrate	Size	M MAX: 170W × 150D × 2.0T mm M I N: 30W × 30D × 0.3T mm (Option MAX: 315w × 300D mm)
	Supply	Substrate · Package Tray · Wafer Tray etc.
Machine	Size	710W × 995D × 1,500H mm
	Weight	approx. 600kg
Utility	Power	AC200V or AC220V 3phase 50/60Hz 15A
	Compressed Air	Compressed Air Pressure : 0.5Mpa Consumption : approx. 15NL/min Connection : Joint for 8mm tube
	Vacuum	-70kPa or more



Safety and Usage Precautions

We provide "Delivery Specification" that explain precautions for the specifications and safety of each product listed in this catalog. We strongly recommend that you exchange these delivery specifications with customers that use one of these products.



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