Attracting Tomorrow TDK

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.

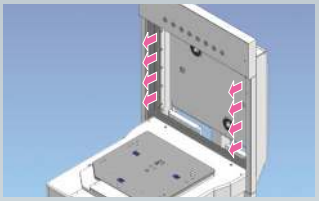
Specifications

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 protrution 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

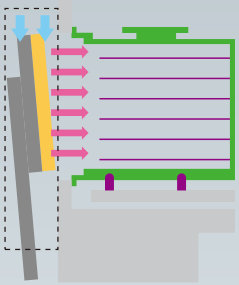
Load Port Purge Application

Two types of purge functions are selectable.

TAS-FP



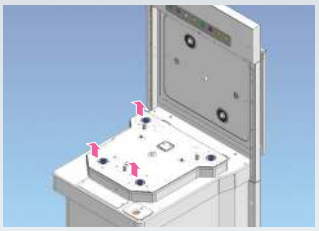
Open FOUP door and inject N2 gas or dry air into FOUP



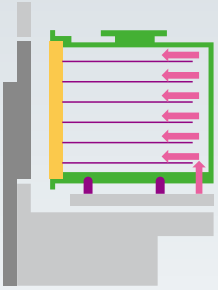
Features

- 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 F O U P



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)	≧0.52MPa ≧30L/min(ANR) Connection：φ6mm tube
	Vacuum	−61±10kPa ≧40L/min Connection：φ6mm tube
	Purge gas	≧0.5MPa ≧200L/min(ANR) Connection：φ3/8inch tube
	Clean Dry Air (Chanber cleaning)	≧0.52MPa Connection：φ3/8inch tube
	Exhaust	200～400L/min Connection：φ50mm 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±10% Max.32.5A
	Air(For driving)	0.52～0.6MPa ≧120L/min(ANR) Connection：φ6mm tube
	Vacuum	−61±10kPa ≧40L/min Connection：φ6mm tube
	N2 gas	0.52～0.7MPa ≧300L/min Connection：φ1/2inch tube
	N2 Purity	≧99.999%
	Clean Dry Air (Exposure to air)	0.52～0.7MPa ≧300L/min Connection：φ10mm tube
	Exhaust	≧300L/min Connection：φ100mm 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 (Verious LED・LD・CMOS Sensor・TCXO・SAW・Opto・RF Module etc.) Package & Panel (Driver Chip・FOWLP/FIWLP 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	MMAX：170W × 150D × 2.0T mm MIN： 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.

TDK

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