CLEAN TRACK LITHIUS Pro V
Specifications

MACHINE NO. MDV120377

CUSTOMER		Tokyo Electron Ltd.		Tokyo Electron Kyushu Ltd.	
Approval	Originator	Approval	Originator	Approval	Originator

INTRODUCTION

<Application>
This specification is available for the CLEAN TRACKLITHIUS Pro V which is the most recent model in the highly successful CLEAN TRACK series of Tokyo Electron Limited.

<Equipment Overview>
CLEAN TRACK LITHIUS Pro V is used in the photolithography process. It is microprocessor controlled system automating all processes continually including adhesion promoter, prebaking, coating, development and post-baking.

<1.Warranty for the Products>

1.1 Scope of Warranty
TOKYO ELECTRON LIMITED ("TEL") shall warrant that certain items distributed by TEL ("Products") will conform to specifications furnished or approved by TEL ("Specifications") under normal use and service in accordance with the manuals which TEL provides with respect to the Products ("TEL's manuals"). In the event that the Products do not conform to the Specifications under the above conditions during the warranty period for the Products, TEL shall provide maintenance services for such warranted Products without charge. Such maintenance shall be provided for the purpose of repair of the function and performance of the Products to the Specifications, and, at TEL's discretion, if parts are required to be replaced, TEL shall replace such parts with new parts or recycled parts equivalent to the new parts in performance.

1.2 Warranty Period
The warranty period of the Products which are systems shall be one (1) year from the date when the Products satisfy the acceptance criteria.

1.3 Exception
TEL shall have no liability under this warranty and the above remedies shall not be available to the Product user ("User") for the following damage:
(1)Damage to the Products caused by parts specified or supplied by the User.
(2)Damage to the Products caused by parts not supplied by TEL or TEL's authorized supplier.
Where the parts were supplied by TEL or TEL's authorized supplier but the warranty period for such parts has expired, TEL shall not be liable for damage to the Products caused by such parts.
(3)Damage to the Products caused by force majeure, including without limitation, governmental acts or directives; strikes; acts of God; war; insurrection, riot or civil commotion; natural disaster, fires, flooding; explosions.
(4)Damage to the Products caused by improvements made without TEL's written consent, or misuse or use of improper materials.
(5)Damage to the Products caused by maintenance provided by anyone other than TEL, TEL's authorized supplier or the User's employees who are trained by TEL for such maintenance of the Products provided they perform such maintenance in accordance with TEL's manuals.
(6)Damage to the Products caused by any deviation from the procedures indicated by TEL.
(7)Consequential damage, including, without limitation, damage resulting from defective products (eg. defective wafers, devices, panels and other defective products produced by using the Products) or decrease of production, caused by misuse and breakdown of the Products.
(8)Damage to the Products caused by a defect which could not have been discovered given the state of scientific or technical knowledge at the time when TEL delivered the Products.
(9)Damage to the Products caused by other products, items or materials for which TEL is not liable under warranty.

1.4 Limitations
THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESSED OR IMPLIED, WRITTEN OR ORAL, STATUTORY OR OTHERWISE, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY/SATISFACTORY QUALITY OR FITNESS FOR A PARTICULAR PURPOSE.

1.5 Attention
(1)The environment, condition and frequency of use of the Products may have negative influence on the life of parts.
(2)The cost of the parts required to maintain the Products after the expiration of the warranty period shall be borne by the User.

(3)The cost of consumable parts and periodic replacement parts shall be borne by the Users even during the warranty period of the Products. In addition, the Users shall bear the cost of labor and transportation etc in connection with replacing the parts above.

<2.Liability for damages due to operation of the Products>

2.1 Liability for operation of the Products

Every operator and service person must read and thoroughly understand TEL's manuals, including, without limitation, the operation and maintenance manuals, and any additional information provided by TEL with respect to the Products and have sufficient training by TEL concerning the operation of the Products. All Danger, Warning and Cautionary notices must be carefully read, thoroughly understood and strictly observed. The User assumes its responsibility to implement all Governmental, Federal, State and local safety regulations and standards applicable to the use of the Products.

In the event that TEL identifies that a defect in the Products may cause damage to the User, TEL will send a technology change notice to the User ("Notice"), and implement the change for the identified part of the Products without charge ("Change"). The User will be required to make the arrangements necessary in order to complete implementation of the Change as soon as receiving the Notice.

2.2 Exception

TEL assumes no liability for the following damages:

(1)Damage due to improper operation or maintenance of the Products by the User.

(2)Damage caused by the alteration or addition made by anyone other than TEL not in accordance with TEL's manuals.

(3)Damage resulting from the User taking no action to implement the Change in spite of TEL's Notice.

(4)Damage caused by the User's failure to replace consumable parts and periodic replacement parts.

(5)Damage caused by operation of the Products not in accordance with the instructions specified in the Specifications and/or TEL's manuals.

(6)Damage to the Products caused by force majeure, including without limitation, governmental acts or directives; strikes; acts of God; war; insurrection, riot or civil commotion; natural disaster, fires, flooding; explosions.

(7)Consequential damage, including, without limitation, damage resulting from defective products(e.g. defective wafers, devices, panels and other defective products produced by using the Products) or decrease of production, caused by misuse or breakdown of the Products.

2.3 Attention

In the event that the Products are maintained and improved with parts not supplied by TEL or TEL's authorized supplier, or parts supplied by TEL or TEL's authorized supplier out of the warranty period of the parts, the User shall be liable for any defective work and incomplete performance of the Products.

Please do not defeat and of the safety interlocks on yoursystem. Please be sure that all of the safety interlocks on your system are enabled prior to performing any operations and/or maintenance on the system.

2.4 Infringement

(1)TEL agrees to indemnify and hold the User harmless from and against any claims or actions that the Products infringe upon any rights of any third parties, including, without limitation, patent, copyright, trademark, mask works right or any other intellectual property rights, provided, however, that the User shall give TEL prompt written notice of all such claims or actions of infringement and shall provide TEL with necessary assistance and all defenses against such claims or actions, known or available to the User. TEL does not indemnify and shall not be liable for any claim of infringement, if it is arising out of: (i) the products produced utilizing the Products; (ii) the User's modification of the Products; (iii) the compliance of TEL with the User's designs, specifications, instructions, modifications or improvements; (iv) the User's combination of the Products with other products; or (v) processes or methods performed utilizing the Products.

(2)TEL shall have exclusive control over the defense, negotiation or settlement of any claims which shall be indemnified by TEL subject to the above Paragraph (1). TEL shall have the option of, and TEL's obligation of indemnification for the User shall be limited to, the following actions: (i) settling or defending against any claims of infringement with any third party asserting such claims; (i) procuring for the User the right to continue use of the Products; (iii) modifying or substituting the Products such that the Products are noninfringing; or (iv) refunding payments paid by the User for the Products.

3.Limitation of liability

IN NO EVENT SHALL TEL BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOSS OF PROPERTY, LOSS OF PROFITS OR LOSS OF PRODUCTION DAMAGES, RESULTING FROM THE PRODUCTS OR CAUSED BY INSTALLATION, MAINTENANCE OR OTHER PERFORMANCE BY TEL, WHETHER A CLAIM FOR SUCH DAMAGES IS BASED UPON WARRANTY, CONTRACT, TORT, NEGLIGENCE OR OTHERWISE. TEL'S TOTAL LIABILITY FOR THE

CLAIM OF LOSSES OR DAMAGES CONCERNING THE PURCHASE, USE, OR OPERATION OF THE PRODUCTS SHALL IN NO EVENT EXCEED THE PURCHASE PRICE PAID BY THE USER TO TEL FOR THE PRODUCTS INVOLVED IN SUCH CLAIM.

*Note: In the event of a conflict between this document and a written agreement signed by authorized representatives of User and TEL, such written agreement shall take precedence.

<Equipment Training>

The TEL-made equipment you have purchased requires routine maintenance for stable operation. These maintenance activities require sufficient basic knowledge on TEL equipment and latest maintenance information.

We offer an equipment training curriculum focusing on operation and maintenance that helps you acquire the necessary knowledge.

For enrolling in our equipment training, see the following:

1. Application
   Contact the local TEL training department or sales / service office to request training. Your enrollment reservation will be registered after the schedule is arranged.

2. Training Fee
   2.1 When You Have Training Credit
   The training credit can be used on the condition provided in section “3.Use of Training Credit”.

   2.2 When You Do Not Have Training Credit
   The specified training fee is charged.

   2.3 Other Expenses
   - For equipment training provided at customer's site: Basically, separate costs are charged such as transportation and accommodation costs.
   - Cancellation fee is charged if the enrollment reservation is canceled or the schedule is changed within two weeks of the expected training start date. The cancellation fee can be paid by the training credit.

3. Use of Training Credit
   3.1 What is Training Credit?
   For one unit of equipment purchased, the specified number of training credits is provided. One training credit allows one trainee to enroll in the training for the equipment purchased for one day (normal hours for providing training).

   3.2 Issuance and Expiration Date
   Training credit is issued together with the equipment serial number when the equipment is allocated to you according to your equipment purchase order sheet. Training credit is valid for one year after the CST date of the equipment purchased.

   3.3 Scope of Application
   The training credit applies to the standard training course for the equipment purchased. It is available only to the customer of the factory where the equipment purchased is installed.

   Note that when the equipment is relocated within the same company, any valid training credit shall be transferred to the destination. Training credit becomes invalid when the equipment is sold or transferred to a company other than the original purchasing company.

   3.4 Deduction of Credit Used (Digestion)
   Any of the following cases assumes one training credit is used for one person for one-day training (within normal training hours). In this case, an appropriate number of credits are deducted from the remaining balance.

   - Completion of equipment training (including discontinuation and early termination by the trainee)
   - Cancellation by customer of enrollment within two weeks of the expected equipment training start date and the cancellation fee is paid by training credit (excluding the case when there is an alternative trainee)
   - Change by customer to the schedule within two weeks of the expected equipment training start date and the

cancellation fee is paid by training credit

3.5 Others

- A separately made agreement (e.g., in a contract), if any, is prioritized.
- Training credit has no cash value and cannot be exchanged or equivalent-exchanged with non-training items (e.g., services, parts, transportation and accommodation costs).
- For more information, contact the sales representative assigned to you.

<Equipment Installation>

1. If the user's facilities (facility hook up, chemicals, wafers, etc.) are not prepared by the user in time, TEL may change the installation schedule. Customer is responsible to provide ample wafer throughout the installation. In thiscase, installation engineers of TEL may repatriate from user's site for a time.
   The primary utility lines (such as Electrical, Water, Gas, Exhaust and Chemical lines) and the chemical supply & safety-related communication shall be connected by the customer.

2. Precautions for Utility preparation:

Due to the floor surface treatment for utility preparation, the strength of loading weight resistance may lower and the coating on the floor can be damaged. Please reinforce the floor strength of loading weight resistance at your own risk.

<Definition of Consumables>

Those parts that require replacement within certain periods from the start of system operation due to degradation and wear, parts that are started to be degraded and worn after the start of the manufacture and parts that are degraded and worn after the start of their use are defined as "consumables." Degradation and wear do not include damage and wear caused by design elements and damage and wear due to the manufacturing processes of the parts. The consumables of the Clean Track system are listed below:

	Consumable	Example
1	Parts requiring replacement due to time after manufacture of parts themselves.	Rubber products, etc
2	Parts requiring replacement due to operating hours(system operation hours)	Lamps, etc
3	Parts that start to be degraded and worn simultaneously with the start of their use.	Nozzle chips, wetted parts, etc
4	Disposable parts and non-warranty parts	Disposal cups, grease, etc

Specification-Contents

1.Basic Information

1-1. Basic Specifications

・ Wafer Size	Comply with SEMI M1.15 300mm
Material	Silicon
・ Utility Outlet	Vertical downward
・ T&H Controller	System THC
・ Transfer ARM Throughput	221-250wph(Refer to Wafer Flow for details.)

7.Trilayer coat:BARC+Resist+Top coat/Bake + Post Rinse

4→6→5 flow.

■Targeted TP=240wph

	CSB	BCT							COT						ITC						MPRA	IPRB			IFB		IPRB		DEV								CSB
Temperature						180-220				95-130								90													90-125			max125				
Wafer Flow	FOUP	TRS	(CADH)	SCPL	BCT	CGRA	SBU	SCPL	COT	CPRP	BWEH		SBU	TRS	SCPL	ITC	CGRA		SBU	SBU	ISHU	BST	CPL	EIF	EIF	TRS	PIR	TRS	CSWP	SCPL	DEV	CGRA		CPL	FOUP
Qt,y of Station	4	2	6	3	4	6	1	3	4	8	1	0	1	1	3	4	6	0	1	10	1	4	2	1	1	2	2	5	8	3	8	6	0	2	4
Process Time			50	40	50	60		33	50	90	6				33	50	60					57.6	17				21		90	33	85	55		6	
Cooling Time						8				15							14												15			15			
Overhead Time			15	3	7	12		9	7	12	8				3	7	12						11				7		12	3	10	12		8.4	
Total Time		0.0	10.8	14.3	14.3	13.3	0.0	14.0	14.3	14.6	14.0	0.0	0.0	0.0	12.0	14.3	14.3	0.0	0.0	13.0	0.0	14.4	14.0	0.0	0.0	0.0	14.0	0.0	14.6	12.0	11.9	13.7	0.0	14.4	
Transfer Type(wph) 250		Max	5	Trans * 2.88	sec. =	14.4																	PRAI =	14.4												
Throughput	**246**																																				

*Confirm all SPIN's common arms throughput and CRD pumps throughput.

8-1.Trilayer coat:BARC1+BARC2 +Resist(no top coat) + Post Rinse

4→5→6 flow.

■Targeted TP=240wph

	CSB	BCT						ITC						COT							MPRA	IPRB			IFB		IPRB		DEV								CSB
Temperature																	95-130												90-125			max125				
Wafer Flow	FOUP	TRS	(CADH)	SCPL	BCT	CGRA	SBU	SCPL	ITC	CGRA			SBU	TRS	SCPL	COT	CPRP	BWEH	SBU	SBU	ISHU	BST	CPL	EIF	EIF	TRS	PIR	TRS	CSWP	SCPL	DEV	CGRA		CPL	FOUP
Qt,y of Station	4	2	6	3	4	7	1	3	4	6	0	0	1	1	3	4	8	1	1	10	1	4	2	1	1	2	2	5	8	3	8	6	0	2	4
Process Time			50	40	50	60		33	50	60					33	50	90	6				57.6	17				21		90	33	85	55		6	
Cooling Time						8				8							15												15			15			
Overhead Time			15	3	7	12		9	7	12					3	7	12	8					11				7		12	3	10	12		8.4	
Total Time		0.0	10.8	14.3	14.3	11.4	0.0	14.0	14.3	13.3	0.0	0.0	0.0	0.0	12.0	14.3	14.6	14.0	0.0	13.0	0.0	14.4	14.0	0.0	0.0	0.0	14.0	0.0	14.6	12.0	11.9	13.7	0.0	14.4	
Transfer Type(wph) 250		Max	5	Trans * 2.88	sec. =	14.4																	PRAI =	14.4												
Throughput	**246**																																				

*Confirm all SPIN's common arms throughput and CRD pumps throughput.

8-2.Trilayer coat:OPL/bake1,bake2+SiHM +Resist(no top coat) + Post Rinse

4→5→6 flow.

■Targeted TP=240wph

	CSB	BCT						ITC							COT							MPRA	IPRB			IFB		IPRB		DEV								CSB
Temperature									250-350								95-130												90-125			max125				
Wafer Flow	FOUP	TRS	(CADH)	SCPL	BCT	CGRA	SBU	TRS	CHHA	SCPL	ITC	CGRA	SBU	TRS	SCPL	COT	CPRP	BWEH	SBU	SBU	ISHU	BST	CPL	EIF	EIF	TRS	PIR	TRS	CSWP	SCPL	DEV	CGRA		CPL	FOUP
Qt,y of Station	4	2	6	3	4	7	1	1	4	3	4	6	1	1	3	4	8	1	1	10	1	4	2	1	1	2	2	5	8	3	8	6	0	2	4
Process Time			50	40	50	60			60	33	50	60			33	50	90	6				57.6	17				21		90	33	85	55		6	
Cooling Time						8			8			8					15												15			15			
Overhead Time			15	3	7	12			12	9	7	12			3	7	12	8					11				7		12	3	10	12		8.4	
Total Time		0.0	10.8	14.3	14.3	11.4	0.0	0.0	20.0	14.0	14.3	13.3	0.0	0.0	12.0	14.3	14.6	14.0	0.0	13.0	0.0	14.4	14.0	0.0	0.0	0.0	14.0	0.0	14.6	12.0	11.9	13.7	0.0	14.4	
Transfer Type(wph) 250		Max	5	Trans * 2.88	sec. =	14.4																	PRAI =	14.4												
Throughput	**180**																																				

*Confirm all SPIN's common arms throughput and CRD pumps throughput.

8-1.Trilayer coat:BARC1+BARC2 +Resist(no top coat) + Post Rinse w/WISC

4→5→6 flow.

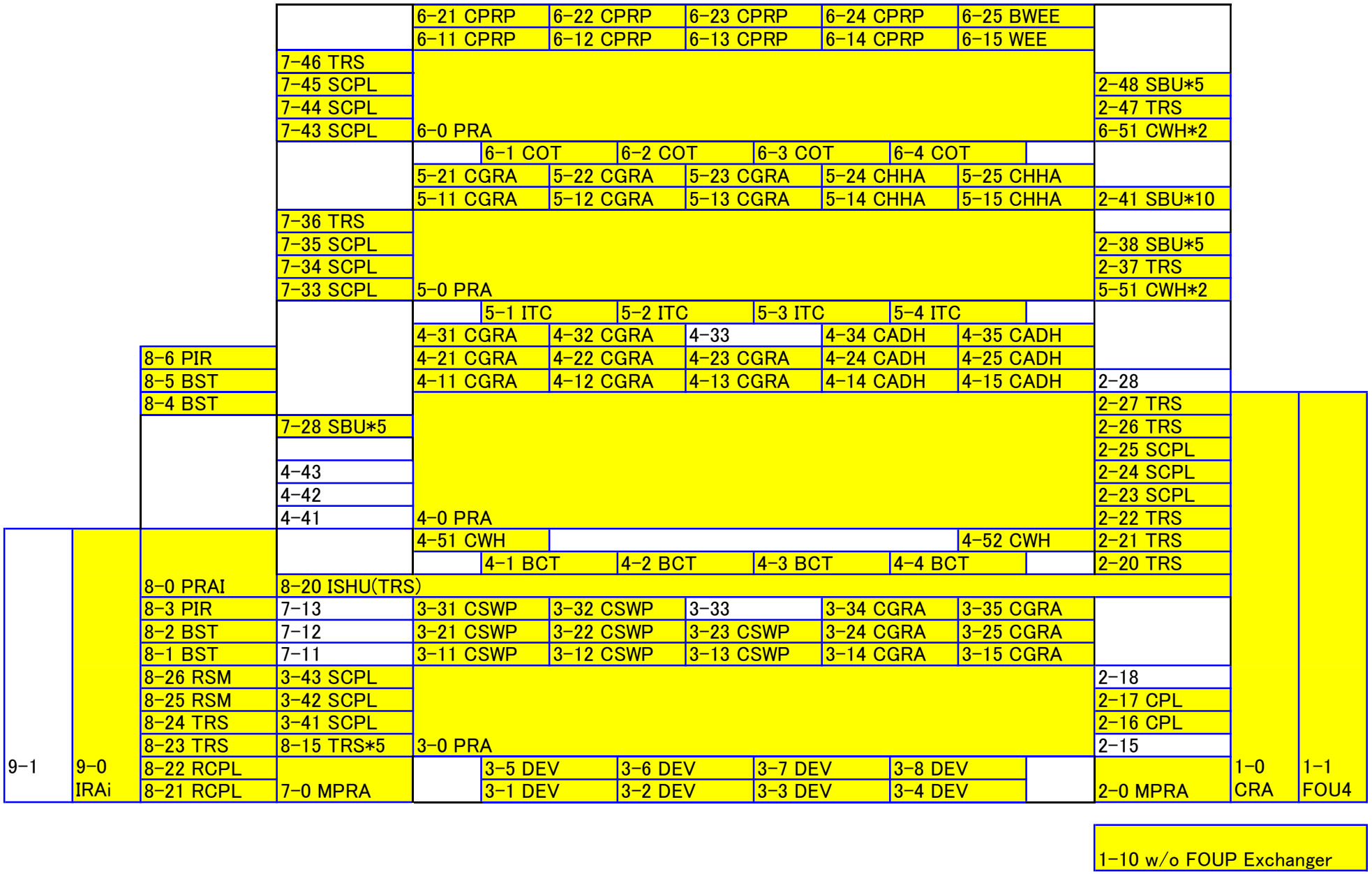
■Targeted TP=240wph

	CSB	BCT						ITC						COT								MPRA	IPRB			IFB		IPRB		DEV								CSB
Temperature																	95-130												90-125			max125				
Wafer Flow	FOUP	TRS	(CADH)	SCPL	BCT	CGRA	SBU	SCPL	ITC	CGRA			SBU	TRS	SCPL	COT	CPRP	BWEH	WISC	SBU	SBU	ISHU	BST	CPL	EIF	EIF	TRS	PIR	TRS	CSWP	SCPL	DEV	CGRA		CPL	FOUP
Qt,y of Station	4	2	6	3	4	7	1	3	4	6	0	0	1	1	3	4	8	1	1	1	10	1	4	2	1	1	2	2	5	8	3	8	6	0	2	4
Process Time			50	40	50	60		33	50	60					33	50	90	6					57.6	17				21		90	33	85	55		6	
Cooling Time						8				8							15													15			15			
Overhead Time			15	3	7	12		9	7	12					3	7	12	8	14.4					11				7		12	3	10	12		8.4	
Total Time		0.0	10.8	14.3	14.3	11.4	0.0	14.0	14.3	13.3	0.0	0.0	0.0	0.0	12.0	14.3	14.6	14.0	14.4	0.0	13.0	0.0	14.4	14.0	0.0	0.0	0.0	14.0	0.0	14.6	12.0	11.9	13.7	0.0	14.4	
Transfer Type(wph) 250		Max	6	Trans * 2.88	sec. =	17.28																		PRAI =	14.4												
Throughput	**208**																																				

bottle neck: COT PRA transfer

*Confirm all SPIN's common arms throughput and CRD pumps throughput.

1-3. Configuration

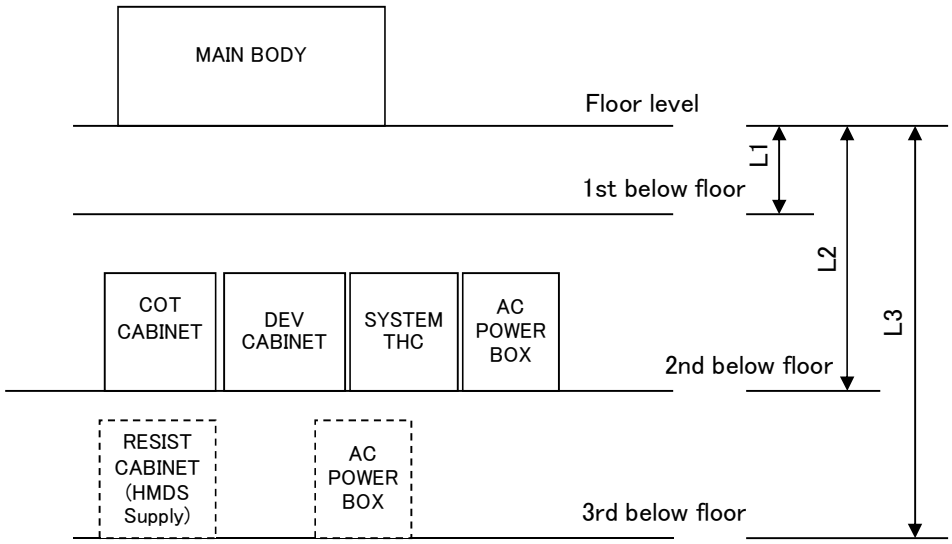


*Required set up condition

Main Body	Temperature	Room temperature should be within 20 to 25 deg-C. Set up main body within +/- 2.0 deg-C from room temperature. (Fluctuation rate: ±1deg-C per 10min)
	Humidity	Room Humidity should be within 40-50%RH. Set up main body within +/- 5.0 %RH from room Humidity. (Fluctuation rate: ±1% per 10min)
Chemical Cabinet	Temperature	Room temperature should be within 19 to 27 deg-C. Set up main body within +/- 4.0 deg-C from room temperature. The limitation of Chemical temperature control set value ±2deg-C should take priority over the temperature control performance.
	Humidity	Non condensing
THC	Temperature	Room temperature should be within 20 to 27 deg-C. Refer to OEM manual for the Room temperature range (Fluctuation rate: ±1deg-C per 10min)
	Humidity	Room Humidity should be within 40-50%RH. Refer to OEM manual for the Room temperature range (Fluctuation rate: ±1% per 10min)
AC Power Box	Temperature	Room temperature should be within 19 to 27 deg-C. Set up main body within +/- 4.0 deg-C from room temperature.
	Humidity	Non condensing

LOCATION

＊ The below figure is a reference. Please refer to "Mounting positions" for the actual location.



Floor structure

	Floor level	1st below floor	2nd below floor	3rd below floor
Floor Height : L1-L3 (m)	0		9.9	2ndとの差=4.6

Mounting positions

Standard structure	Floor level	1st below floor	2nd below floor	3rd below floor
MAIN BODY	○	–	–	–
COT CABINET			○	
DEV CABINET			○	
SYSTEM THC			○	
AC POWER BOX			○	
Other	**Floor level**	**1st below floor**	**2nd below floor**	**3rd below floor**
RESIST CABINET(COT CABINET(2))				
DEV CABINET(2)		–	–	–
TRANS. BOX				
FIRE EXTINGUISHER(1)				
FIRE EXTINGUISHER(2)				
MECA(YSM Future Plan)				

Specified length of line (unit: 1m)

	Floor level	1st below floor	2nd below floor	3rd below floor
Floor level	–	–	–	–
1st below floor	–	–	–	–
2nd below floor	25	–	15	–
3rd below floor				

Specified of special length except the above-mentioned (unit: 1m)

*** - ***	Special length(m)
MAIN BODY - DEV CABINET	30
MAIN BODY - COT CABINET	25
COT CABINET - DEV CABINET (Air, N2, DIW ONLY)	30
DEV CABINET - Other External Equipment	30
SYSTEM THC - MAINBODY DUCT	15
SYSTEM THC - MAINBODY (except DUCT)	20

2.Module Specification

2-1-1. Carrier Station Block : CSB (1)

・ Roadport Stage Height	900 mm (Comply with SEMI E15.1)
・ Wafer Transport Method	Single fork robotics transport method (X, Y, Z, Theta)
・ Sensor Placement Sensor	Monitoring carrier to be set correctly.
Presence Sensor	Monitoring presence/absence of carrier on load port.
Mapping Sensor	Checking wafers position in carrier.
Wafer Out Sensor	Detecting wafers out from the carrier.
Wafer Sensor	Detecting presence/absence of wafer on fork and also wafers out from fork.
・ Load Port Specifications	BOLTS/Light (Comply with SEMI E92)
・ Loader	FOUP-capable
・ Loadport Lockout Pin (SEMI E1.9)	FEOL
・ Loadport Indicator	Comply to customer requirement.
・ Operator Access Switch	Operator access switch installed for each load port.
・ FOUP Type	25 Wafers
・ Borrowing Cassette from Customer	None (Factory-adjusted with FOUP in MFG Dept. at TKL)
・ Kinematic Coupling Pin (SEMI E57)	TEL standard specification.
・ Independent Clamp	Carrier Fixing at Undock Position
・ Media Drive	DVD-RW Drive
・ Keyboard / Trackball	Embedded underneath the main operation panel.
・ Fan Filter Unit (FFU)	Fan filter unit is installed.
・ AMHS	OHT
・ OHT SEMI E84 Photo I/O Sensor	TEL provides connection ports for Photo I/O Sensor on the top of CSB. Customer provides Photo I/O Sensor.
Standby Mode	Stand-by for Receiving
Curtain Sensor	None
・ Carrier ID Reader	Capable of Carrier ID Reader
・ Preparation of ID Reader	OMRON (Tiris-Tag , RF) ;Every required parts provided by TEL.
・ Side Panel in Loader part(Front side/Back side)	Present

2-2-1. Process Station Block : PRB (3)

・ Process block transportation arm:PRA Wafer Transport Method	Two fork robotics transport method (X1, X2, Y, Z, Theta)
Wafer Sensor	Detecting presence/absence of wafer on fork and also wafers out from fork.
・ Multipurpose transportation arm:MPRA Wafer Transport Method	One fork robotics transport method (X1,Z)
Wafer ssensor	Detecting presence/absence of wafer on fork and also wafers out from fork.
・ Process block transportation arm(Immersion):PRAi Wafer Transport Method	Two fork robotics transport method (X1, X2, Z, Theta)
Wafer Sensor	Detecting presence/absence of wafer on fork and also wafers out from fork.

2-3-1. BarcCoat Process Station : BCT (4-1)(4-2)(4-3)(4-4)

・ Rotation Speed Setting Range	0, 10 - 4,000 rpm (Set in a minimum unit of 1 rpm)
Accuracy	± 1 rpm of a specified speed within the setting range
・ Acceleration Setting Range	100 - 30,000 rpm/sec (Set in a minimum unit of 100 rpm/sec)
Accuracy	± 7 % of a specified acceleration within the Setting Range
・ Dual Band Monitoring for Rotation Rate Rotation Rate to be Warned	± 10 % or more, or less than ± 20 % of a set speed ... warned
Rotation Rate to be Suspended	± 20 % or more of a set speed ... alarm + station suspended

・ Dummy Dispense	Specified by Dummy Dispense Recipe. (Possible to operate manually on sub-operation panel) Dispense condition can be specified according to the OR, that is Time Interval, Number of Processing Wafers or Number of Process Jobs.
・ Chuck Shape	Concentric circles
Chuck Vacuum Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Exhaust Monitor	Digital manometer (Higher/Lower limit can be set.) 0 - 500 pa
・ Control of Temp. & Humid. Inside Cup	Supplying the air, whose temp and humid are controlled by THC, to the inside cup.
・ ULPA Filter	Installed onto the outlet where temp & humid-controlled-air comes out.
・ General Shutter (PRA Side)	Installed onto the inlet where wafers enter to go into the BCT
COT Cup	Molding
・ Resist Number of Nozzles	3 Nozzles
RESIST NOZZLE	1-3
Nozzle Type	PFA Nozzle Tip
Resist Dispense Control	AMC Valve
Pump Type	CRD(3ml) High throughput
Filter	A2DF20001(0.005um) + A2MX224KT
Nozzle Bath	Nozzle cleaning Type
Resist Filter Auto Air Vent	Enables automatic air venting at resist filter.
Resist Temperature Control	Double Containment Temperature Control
・ Solvent E.B.R.	Stainless steel reduced-diameter nozzle
Back Rinse	Stainless steel reduced-diameter nozzle
RRC Nozzle	PFA Nozzle Tip
Bevel Rinse	Present
Filter Type	A2SFCLM01(0.005um) + A2MX222KTT
・ Exhaust Auto Damper in COT	Switching between ON and OFF for exhausting air around cup.
Exhaust Duct Cleaning Function	Present
・ CUP quick release mechanism	Present
・ Camera installation	Present(Dispense Detect System (DDS))

2-4-1. Coat Process Station : COT (6-1)(6-2)(6-3)(6-4)

・ Rotation Speed Setting Range	0, 10 - 4,000 rpm (Set in a minimum unit of 1 rpm)
Accuracy	± 1 rpm of a specified speed within the setting range
・ Acceleration Setting Range	100 - 30,000 rpm/sec (Set in a minimum unit of 100 rpm/sec)
Accuracy	± 7 % of a specified acceleration within the Setting Range
・ Dual Band Monitoring for Rotation Rate Rotation Rate to be Warned	± 10 % or more, or less than ± 20 % of a set speed ... warned
Rotation Rate to be Suspended	± 20 % or more of a set speed ... alarm + station suspended
・ Dummy Dispense	Specified by Dummy Dispense Recipe. (Possible to operate manually on sub-operation panel) Dispense condition can be specified according to the OR, that is Time Interval, Number of Processing Wafers or Number of Process Jobs.
・ Chuck Shape	Concentric circles
Chuck Vacuum Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Exhaust Monitor	Digital manometer (Higher/Lower limit can be set.) 0 - 500 pa
・ Control of Temp. & Humid. Inside Cup	Supplying the air, whose temp and humid are controlled by THC, to the inside cup.
・ ULPA Filter	Installed onto the outlet where temp & humid-controlled-air comes out.
・ General Shutter (PRA Side)	Installed onto the inlet where wafers enter to go into the COT
COT Cup	Molding
・ Resist Number of Nozzles	8 Nozzles
RESIST NOZZLE	1-8
Nozzle Type	PFA Nozzle Tip

RESIST Dispense Control	AMC Valve
Pump Type	CRD(3ml) High throughput
Filter	A2DF20001(0.005um) + A2MX224KT
・ RESIST Nozzle Bath	Nozzle cleaning Type
・ Resist Resist Filter Auto Air Vent	Enables automatic air venting at resist filter.
Resist Temperature Control	Double Containment Temperature Control
・ Solvent E.B.R.	Stainless steel reduced-diameter nozzle
Back Rinse	Stainless steel reduced-diameter nozzle
RRC Nozzle	PFA Nozzle Tip
Bevel Rinse	Present
Filter Type	A2SFCLM01(0.005um) + A2MX222KTT
・ Exhaust Auto Damper in COT	Switching between ON and OFF for exhausting air around cup.
Exhaust Duct Cleaning Function	Present
・ CUP quick release mechanism	Present
・ Camera installation	Present(Dispense Detect System (DDS))

2-5-1. Immersion Top Coat Process Station : ITC (5-1)(5-2)(5-3)(5-4)

・ Rotation Speed Setting Range	0, 10 - 4,000 rpm (Set in a minimum unit of 1 rpm)
Accuracy	± 1 rpm of a specified speed within the setting range
・ Acceleration Setting Range	100 - 30,000 rpm/sec (Set in a minimum unit of 100 rpm/sec)
Accuracy	± 7 % of a specified acceleration within the Setting Range
・ Protection Film Kind	TMAH Soluble Material
・ Dual Band Monitoring for Rotation Rate Rotation Rate to be Warned	± 10 % or more, or less than ± 20 % of a set speed ... warned
Rotation Rate to be Suspended	± 20 % or more of a set speed ... alarm + station suspended
・ Dummy Dispense	Specified by Dummy Dispense Recipe. (Possible to operate manually on sub-operation panel) Dispense condition can be specified according to the OR, that is Time Interval, Number of Processing Wafers or Number of Process Jobs.
・ Chuck Shape	Concentric circles
Chuck Vacuum Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Exhaust Monitor	Digital manometer (Higher/Lower limit can be set.) 0 - 500 pa
・ Control of Temp. & Humid. Inside Cup	Supplying the air, whose temp and humid are controlled by THC, to the inside cup.
・ ULPA Filter	Installed onto the outlet where temp & humid-controlled-air comes out.
・ General Shutter (PRA Side)	Installed onto the inlet where wafers enter to go into the ITC
・ COT Cup	Molding
・ Resist Number of Nozzles	2 Nozzles
RESIST NOZZLE	1-2
Nozzle Type	PFA Nozzle Tip
Resist Dispense Control	AMC Valve
PUMP Type	CRD(3ml) High throughput
Filter	A2DF20001(0.005um) + A2MX224KT
Nozzle Bath	Nozzle cleaning Type
Resist Filter Auto Air Vent	Enables automatic air venting at resist filter.
Resist Temperature Control	Double Containment Temperature Control
・ Solvent E.B.R.	Stainless steel reduced-diameter nozzle
Back Rinse	Stainless steel reduced-diameter nozzle
RRC Nozzle	PFA Nozzle Tip
Bevel Rinse	Present
Solvent Filter Type	A2SFCLM01(0.005um) + A2MX222KTT
・ Exhaust	

Auto Damper in ITC	Switching between ON and OFF for exhausting air around cup.
Exhaust Duct Cleaning Function	Present
・ CUP quick release mechanism	Present
・ Camera installation	Present(Dispense Detect System (DDS))

2-6-1. RESIST Supply System

・ COT	1-7
・ BCT	1-2
・ ITC	1-2
・ Providing Probe	PL04KBZZC2-AA-000000
・ Type-1 Bottle	1G NOWPAK
Resist Bottle Auto Switching	Present
Line Empty Sensor	Present
L/E Detection Method	L/E Tank(No Sensor)
Resist L/E Tank Auto Air Vent	Enables automatic air venting at Resist L/E Tank.

2-6-2. RESIST Supply System (2)

・ COT	8
・ BCT	3
・ Providing Probe	PL04KBZZC2-AA-000000
・ Type-1 Bottle	1G NOWPAK
Line Empty Sensor	Present
L/E Detection Method	L/E Tank (Tank Side Sensor)
Resist L/E Tank Auto Air Vent	Enables automatic air venting at Resist L/E Tank.

2-6-3. SOLVENT Supply System

・ Facility I/F Factory Supply	Present
Factory Solvent Supply Communication Specifications	Comply to customer requirement.
・ Supply Supply Module	Pump Chemical Liquid Supply System
・ Changing of Solvent Line O-ring (Kalrez)	Change all O-rings used at Solvent Line, which contact with chemical liquid, to the Kalrez ones.

2-6-4. SOLVENT Supply System (2)

・ Facility I/F Factory Supply	Present
Factory Solvent Supply Communication Specifications	Comply to customer requirement.
・ Tank Canister Module	Present
Canister Tank Type	Comply to customer requirement.
Providing Canister Tank	Customer prepares.
Socket Type	SWAGELOK (Kalrez)
Providing Socket	Customer prepares.
Canister Auto Switching	Present
・ Supply Supply Module	Pump Chemical Liquid Supply System
・ Changing of Solvent Line O-ring (Kalrez)	Change all O-rings used at Solvent Line, which contact with chemical liquid, to the Kalrez ones.

2-7-1. Develop Process Station : DEV (3-1)(3-2)(3-3)(3-4)(3-5)(3-6)(3-7)(3-8)

・ Rotation Speed Setting Range	0, 10 - 2,000 rpm (Set in a minimum unit of 1 rpm) w/ADR : 0, 10 - 2,500 rpm
Accuracy	± 1 rpm of a specified speed within the Setting Range
・ Acceleration Setting Range	100 - 3,000 rpm/sec (Set in a minimum unit of 100 rpm/sec)
Accuracy	± 7 % of a specified acceleration within the Setting Range
・ Dual Band Monitoring for Rotation Rate Rotation Rate to be Warned	± 10 % or more, or less than ± 20 % of a set speed ... Warned
Rotation Rate to be Suspended	± 20 % or more of a set speed ... Alarm + station suspended
・ Dummy Dispense	Specified by Dummy Dispense Recipe. (Possible to operate manually on sub-operating panel) Dispense condition can be specified according to the OR, thatis Time Interval or Number of Processing Wafers or Number of Process Jobs.
・ Chuck Shape	Concentric circles
Chuck VAC Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Exhaust Monitor	Digital manometer (Higher/Lower limit can be set.) 0 - 500 pa
・ Control of Temp. & Humid. Inside Cup	Supplying the air, whose temp and humid are controlled by THC, to the inside cup.
・ ULPA Filter	Installed onto the outlet where temp & humid-controlled-air comes out
・ General Shutter (PRA Side)	Installed onto the inlet where wafers enter to go into the DEV.
DEV Cup	GP Cup
・ Develop Nozzle 1 Nozzle Type	None
・ Develop Nozzle 2 Nozzle Type	None
DEV Solution Temperature Control	
・ DEV Solution Filter Type	AHUXMLKX1+AMVXL32KT
・ RINSE Nozzle Nozzle Type	ADR Nozzle
Rinse Nozzle Filter Type	AHUXMLKX1+AMVXL32KT
・ Back Rinse Nozzle Type	Stainless steel reduced-diameter nozzle
Back Rinse Nozzle Filter Type	AHUXMLKX1+AMVXL42KT
Filter Type	AHUXMLKX1+AMVXL22KT
・ Exhaust Auto Damper in DEV	Switching between ON and OFF for exhausting air around cup.
・ MGP DIW sub Nozzle MGP DIW sub Nozzle Filter Type	AHUXMLKX1+AMVXL32KT
・ Develop Nozzle 1 Nozzle type	MGP Nozzle

2-8-1. DEV SOLUTION Supply System

・ Facility I/F Factory Supply	Present
Factory DEV Solution Supply Communication Specifications	Comply to customer requirement.
・ Supply Supply Module Type	Pump Chemical Supply System (3-pump type)

2-8-2. D.I.Water Supply System(Common)

・ Facility I/F Factory Supply	Direct Facility Supply

2-8-3. FIRM Supply System (1)

・ Facility I/F Factory Supply	Present

FIRM Factory Supply Communication	Comply to customer requirement.
・ Supply Supply Module Type	Pump Chemical Supply System (2-pump type)

2-9-1. Post Immersion Rinse Process Station : PIR (8-3)(8-6)

・ Rotation Speed Setting Range	0, 10 - 2,000 rpm (Set in a minimum unit of 1 rpm)
Accuracy	± 1 rpm of a specified speed within the Setting Range
・ Acceleration Setting Range	100 - 3,000 rpm/sec (Set in a minimum unit of 100 rpm/sec)
Accuracy	± 7 % of a specified acceleration within the Setting Range
・ Dual Band Monitoring for Rotation Rate Rotation Rate to be Warned	± 10 % or more, or less than ± 20 % of a set speed ... Warned
Rotation Rate to be Suspended	± 20 % or more of a set speed ... Alarm + station suspended
・ Dummy Dispense	Specified by Dummy Dispense Recipe. (Possible to operate manually on sub-operating panel) Dispense condition can be specified according to the OR, thatis Time Interval or Number of Processing Wafers or Number of Process Jobs.
・ Chuck Shape	Concentric circles
Chuck VAC Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Exhaust Monitor	Digital manometer (Higher/Lower limit can be set.) 0 - 500 pa
・ Control of Temp. & Humid. Inside Cup	Supplying the air, whose temp and humid are controlled by THC, to the inside cup.
・ ULPA Filter	Installed onto the outlet where temp & humid-controlled-air comes out
・ GENERAL PIR CUP	Cutting
・ Nozzle Type	IDR nozzle + Back Rinse
・ Rinse Nozzle Filter Type	AHUXMLKX1+AMVXL22KT
・ Back Rinse Filter Type	AHUXMLKX1+AMVXL22KT
Nozzle Type	Stainless steel reduced-diameter nozzle

2-10-1. Backside Surface Treatment Process Station : BST (8-1)(8-2)(8-4)(8-5)

・ Rotation Speed Setting Range	0, 10 - 2,500 rpm (Set in a minimum unit of 1 rpm)
Accuracy	± 1 rpm of a specified speed within the Setting Range
・ Acceleration Setting Range	100 - 3,000 rpm/sec (Set in a minimum unit of 100 rpm/sec)
Accuracy	± 7 % of a specified acceleration within the Setting Range
・ Dual Band Monitoring for Rotation Rate Rotation Rate to be Warned	± 10 % or more, or less than ± 20 % of a set speed ... Warned
Rotation Rate to be Suspended	± 20 % or more of a set speed ... Alarm + station suspended
・ Dummy Dispense	Specified by Dummy Dispense Recipe. (Possible to operate manually on sub-operating panel) Dispense condition can be specified according to the OR, thatis Time Interval or Number of Processing Wafers or Number of Process Jobs.
・ Chuck Shape	Concentric circles
Chuck VAC Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Exhaust Monitor	Digital manometer (Higher/Lower limit can be set.) 0 - 500 pa
・ Control of Temp. & Humid. Inside Cup	Supplying the air, whose temp and humid are controlled by THC, to the inside cup.
・ ULPA Filter	Installed onto the outlet where temp & humid-controlled-air comes out
・ General BST Cup	Cutting
・ Wafer Backside Treatment Brush Material	PVA
Brush Contact pressure Control Setting Range	0.5-1.5 N
Brush Contact pressure Control Accuracy	±0.25 N
Brush Rotation Speed	1 - 1000 rpm
Brush	10 - 1000 rpm/sec
・ Brush Rinse	

Brush Rinse Nozzle	
Brush Sub Rinse	
Brush Buth Rinse	
Filter Type	AHUXMLKX1+AMVXL32KT
・ Rinse Nozzle Nozzle Type	IDR nozzle + IE nozzle
・ Rinse/IE Nozzle Filter Type	AHUXMLKX1+AMVXL22KT

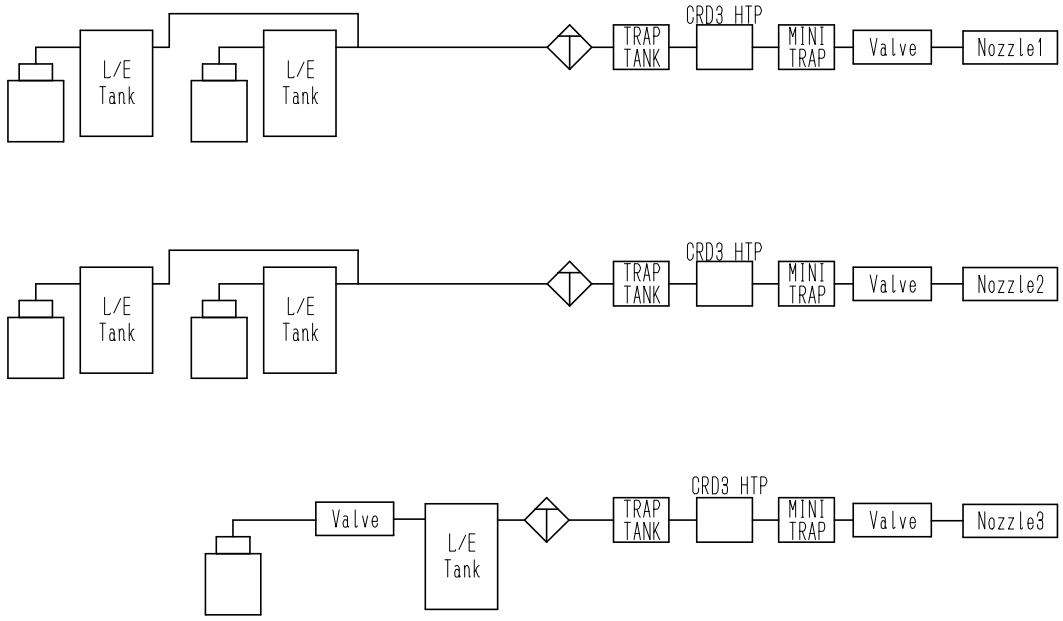
2-11-1. COT Drain System

・ Module	COT-ALL
・ Drain Method	Facility direct drain (w/o pump)
・ Factory Drain Communication Specifications	None

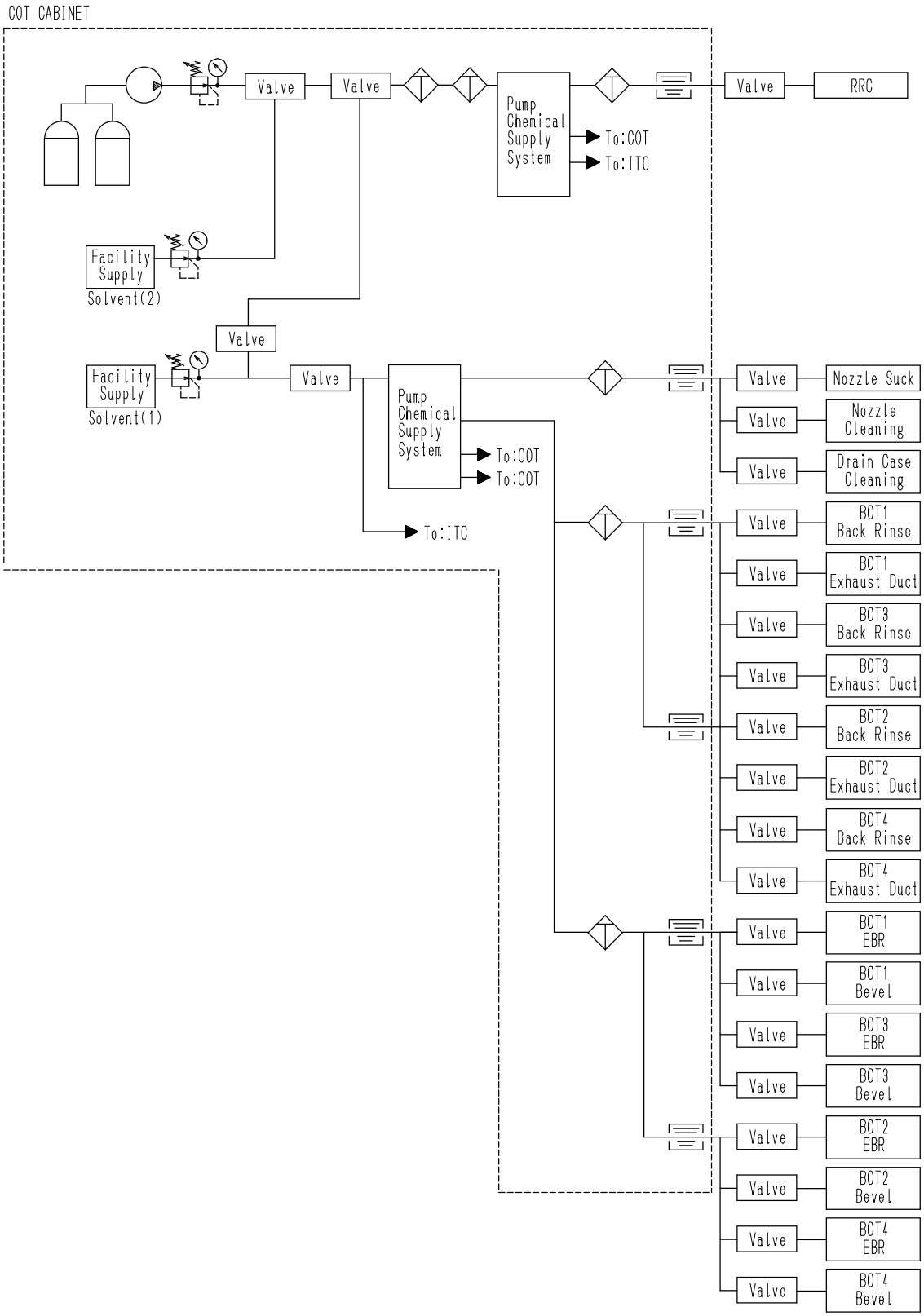
2-11-2. DEV Drain System

・ Drain Method	Facility direct drain (w/o pump)

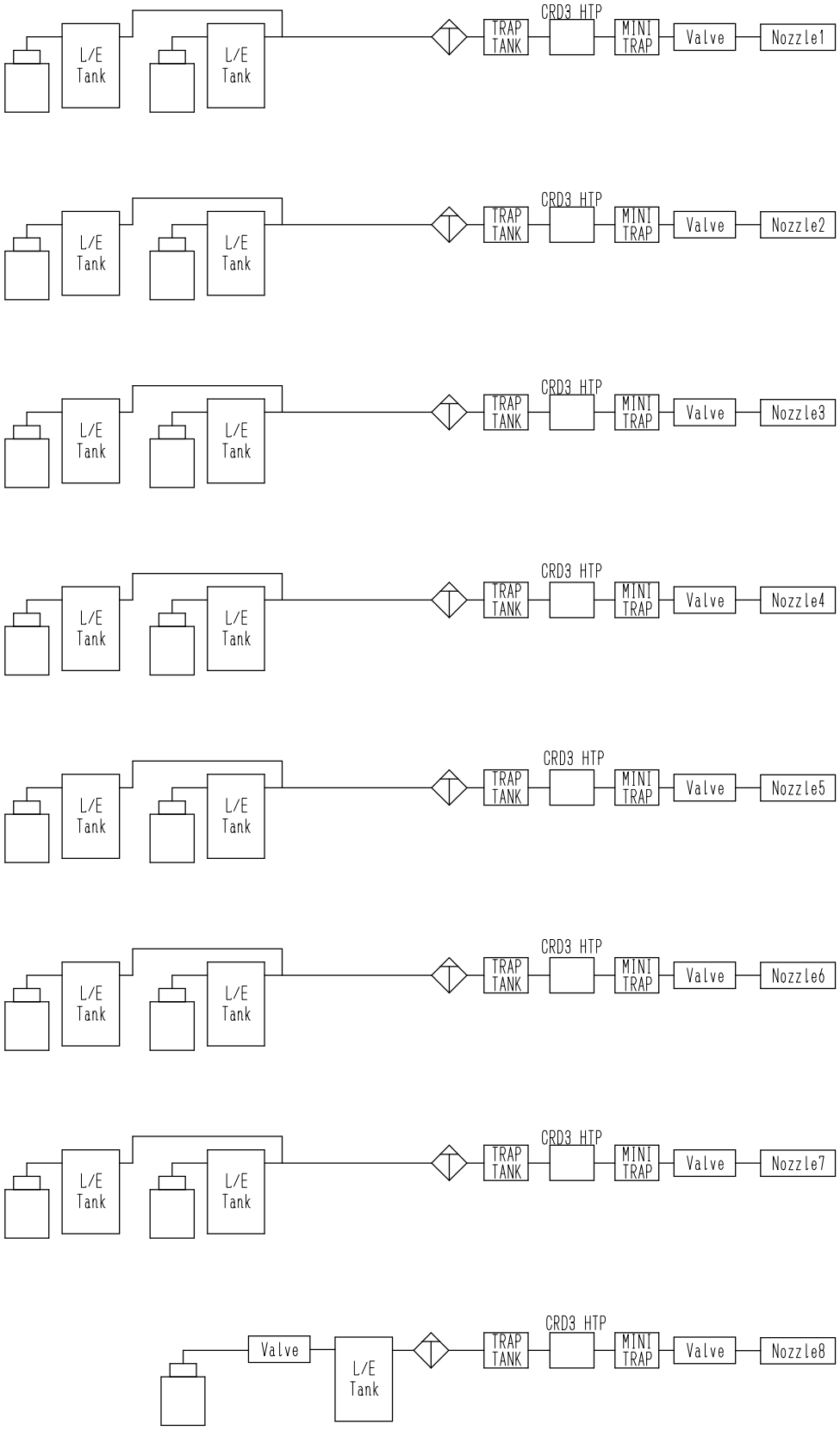
BCT DISPENSE DIAGRAM (1/2)



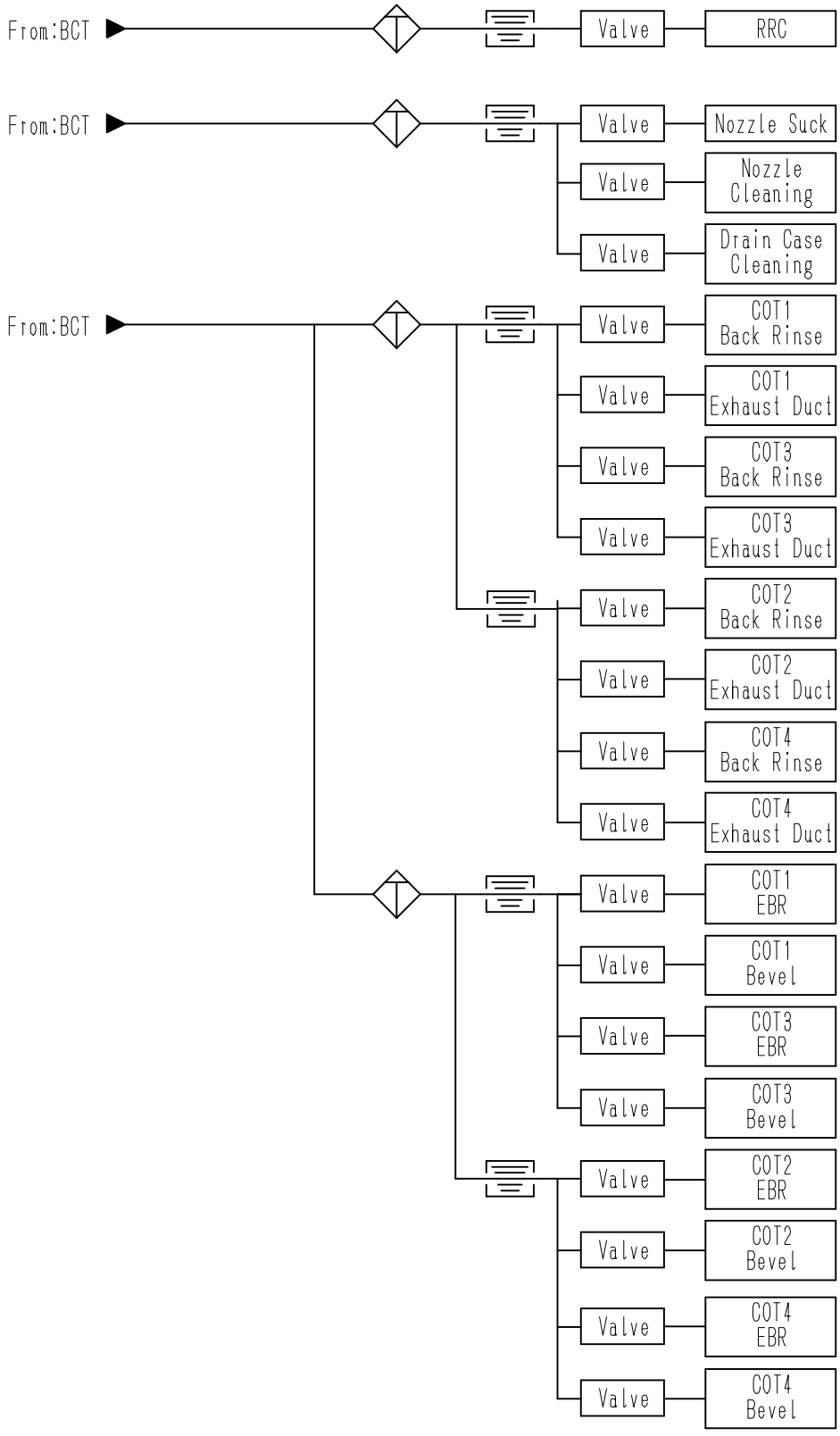
BCT DISPENSE DIAGRAM (2/2)



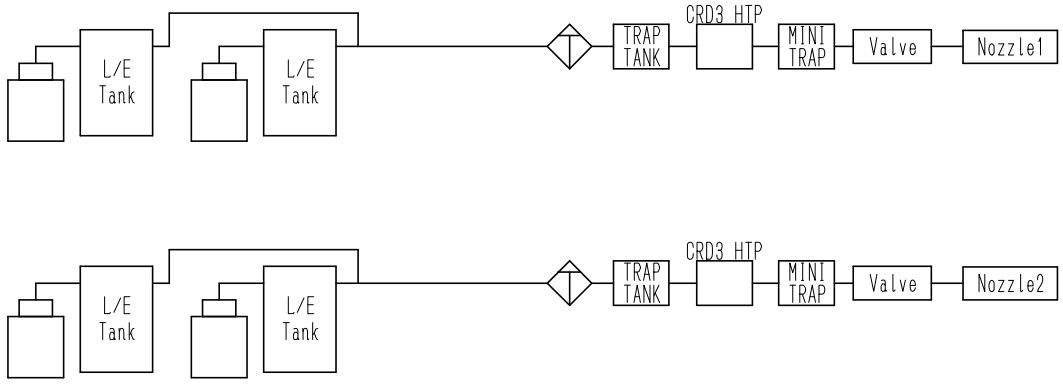
COT DISPENSE DIAGRAM (1/2)



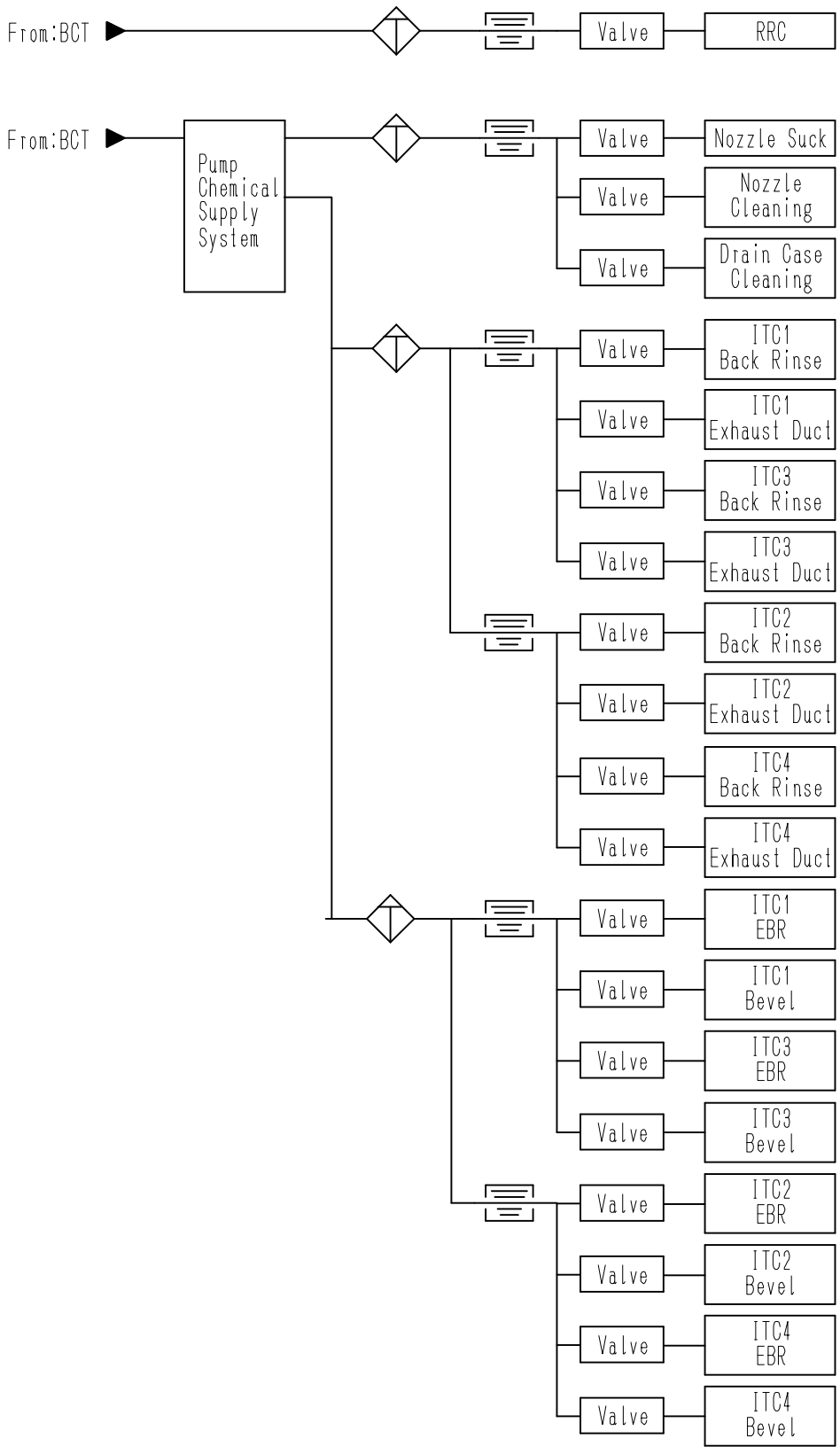
COT DISPENSE DIAGRAM (2/2)



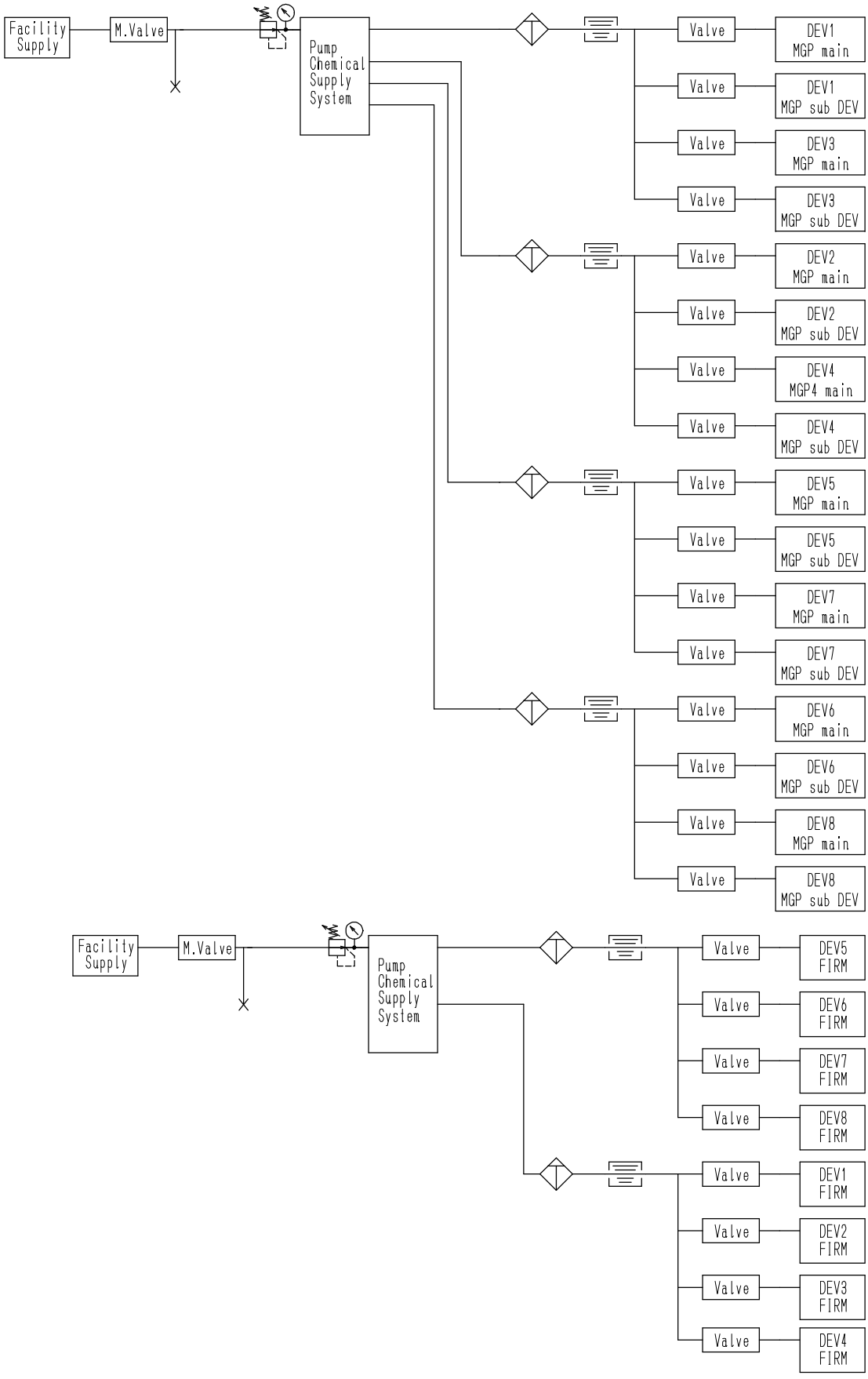
ITC DISPENSE DIAGRAM (1/2)



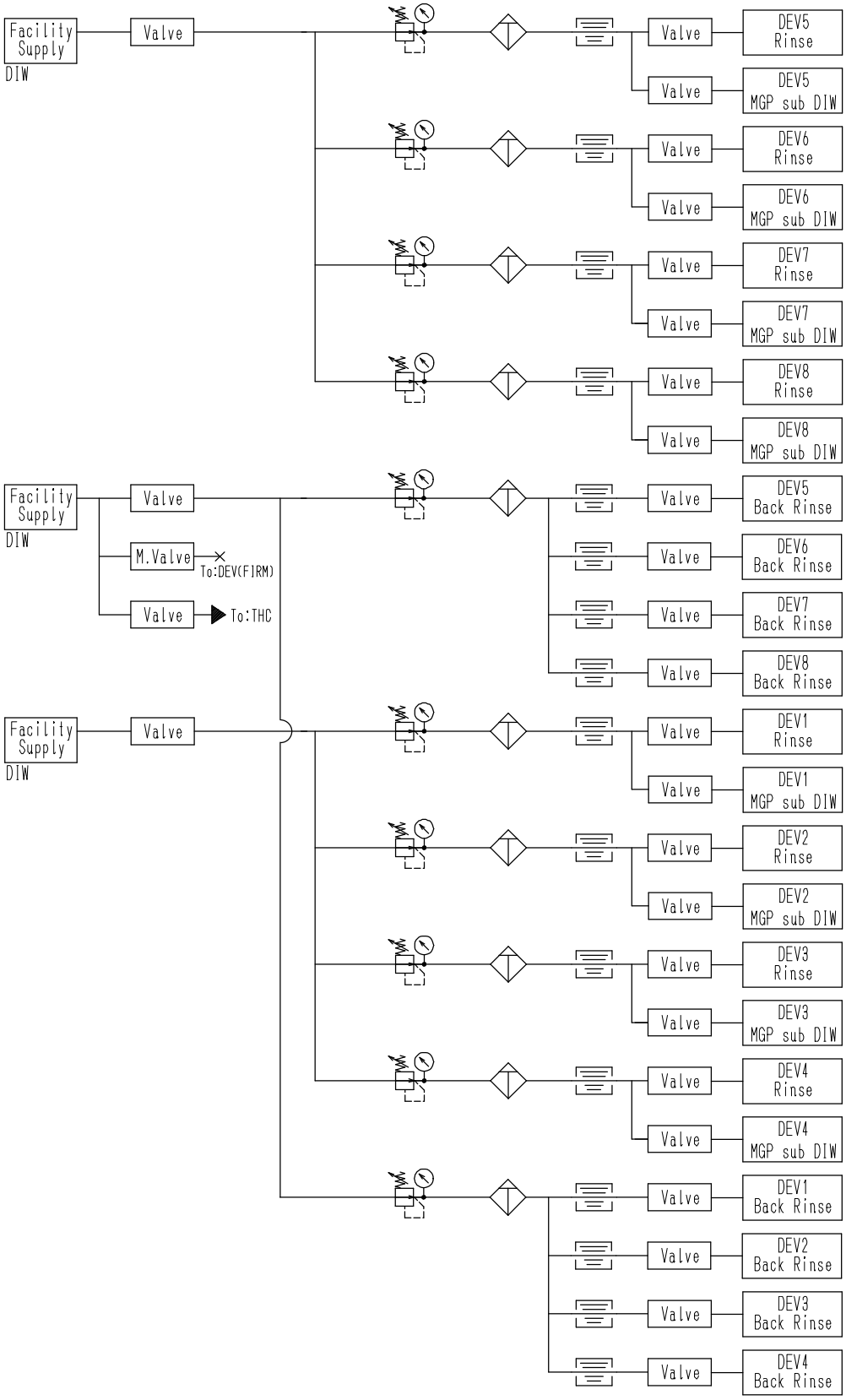
ITC DISPENSE DIAGRAM (2/2)



DEV DISPENSE DIAGRAM (1/2)

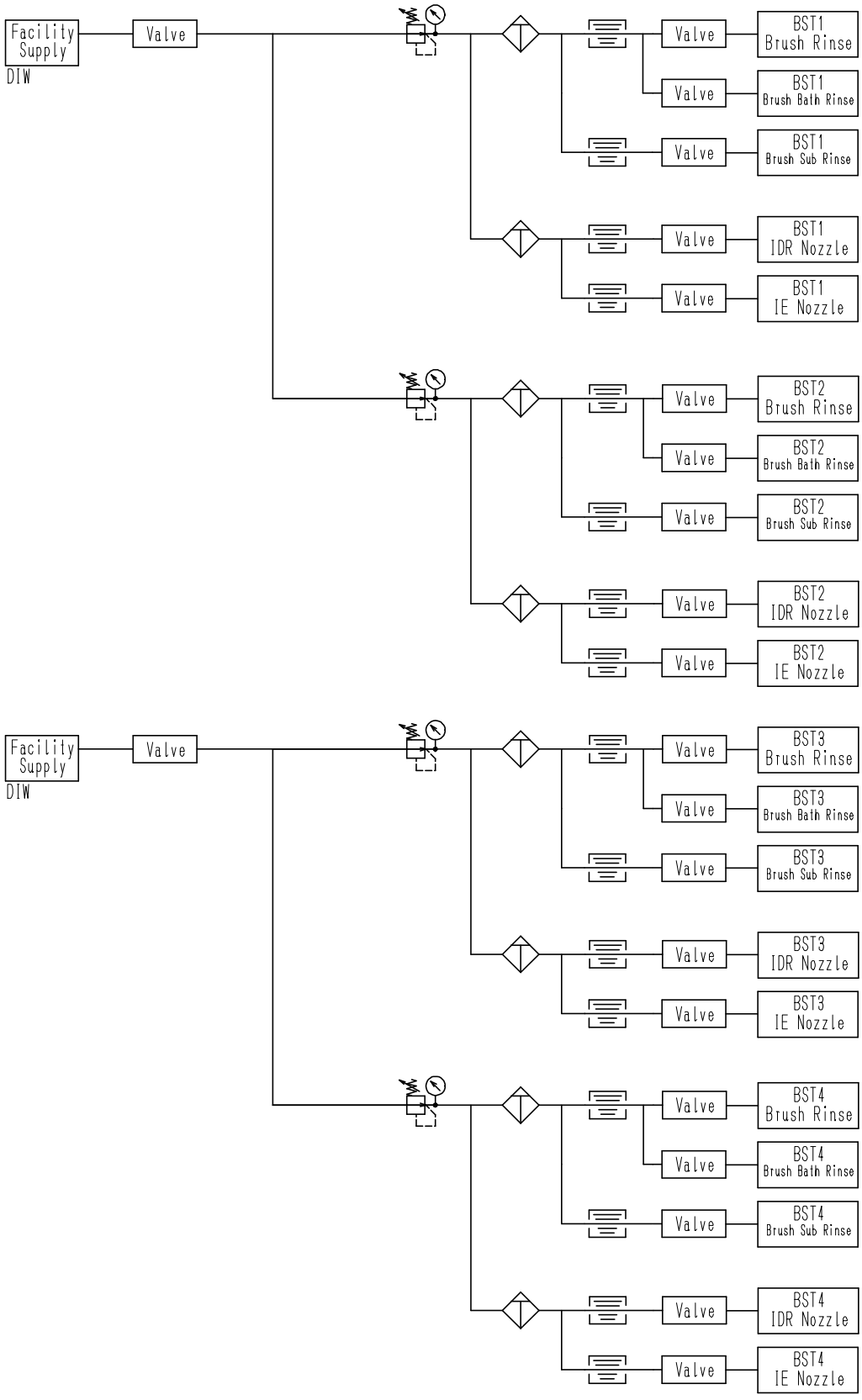


DEV DISPENSE DIAGRAM (2/2)

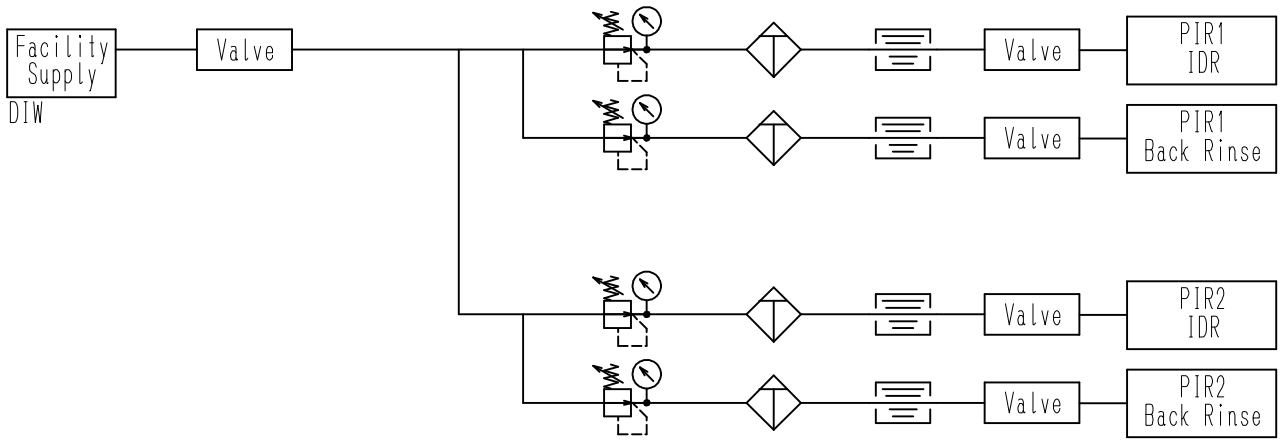


※LD ノズルバス用 N2 パージ、PDR 用 N2 ラインは、ここでは省略する。

BST DISPENSE DIAGRAM (1/1)



PIR DISPENSE DIAGRAM (1/1)



2-13-1. Chilling High Temperature Hot Plate Process Station : CHHA (5-14)(5-15)(5-24)(5-25)

・ Temperature Range	50.0 - 350.0 °C (Set in a minimum unit of 0.1 °C)
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned
Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Hot Plate Heating Method	Using 1ch concentric circle patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.2 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide prevents displacement of wafers When they are placed onto a hot plate
・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin

2-14-1. Chilling Supreme Precision Hot Plate Process Station with Warpage wafer leveling: CSWP (3-11)(3-12)(3-13)(3-21)(3-22)(3-23)(3-31)(3-3

・ Temperature Range	50.0 - 180.0 °C (Set in a minimum unit of 0.1 °C)
・ Hot Plate High Speed Rapid Temperature Change Function	Present
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned
Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Hot Plate Heating Method	Using concentric circles patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.1 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide prevents displacement of wafers When they are placed onto a hot plate
・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin

2-15-1. Chilling General-Purpose Rapid Change in Temperature Hot Plate Process Station with Intake: CGRA (3-14)(3-15)(3-24)(3-25)(3-34)(3-3

・ Temperature Range	50.0 - 250.0 °C (Set in a minimum unit of 0.1 °C)
・ Hot Plate High Speed Rapid Temperature Change Function	Present
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned
Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Hot Plate Heating Method	Using 7ch concentric circles patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.1 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide (height : 5 mm) made out of high purity alumina prevents displacement of wafers When they are placed onto a hot plate
・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin

2-15-2. Chilling General-Purpose Rapid Change in Temperature Hot Plate Process Station with Intake: CGRA (4-11)(4-12)(4-13)(4-21)(4-22)(4-2

・ Temperature Range	50.0 - 250.0 °C (Set in a minimum unit of 0.1 °C)
・ Hot Plate High Speed Rapid Temperature Change Function	Present
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned

Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Hot Plate Heating Method	Using 7ch concentric circles patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.1 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide (height : 5 mm) made out of high purity alumina prevents displacement of wafers When they are placed onto a hot plate
・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin

2-15-3. Chilling General-Purpose Rapid Change in Temperature Hot Plate Process Station with Intake: CGRA (5-11)(5-12)(5-13)(5-21)(5-22)(5-2

・ Temperature Range	50.0 - 250.0 °C (Set in a minimum unit of 0.1 °C)
・ Hot Plate High Speed Rapid Temperature Change Function	Present
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned
Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Hot Plate Heating Method	Using 7ch concentric circles patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.1 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide (height : 5 mm) made out of high purity alumina prevents displacement of wafers When they are placed onto a hot plate
・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin

2-16-1. Chilling High Precision Rapid Change in Temperature Hot Plate Process Station: CPRP (6-11)(6-12)(6-13)(6-14)(6-21)(6-22)(6-23)(6-24)

・ Temperature Range	50.0 - 180.0 °C (Set in a minimum unit of 0.1 °C)
・ Hot Plate High Speed Rapid Temperature Change Function	Present
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned
Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Hot Plate Heating Method	Using 7ch concentric circles patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.1 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide prevents displacement of wafers When they are placed onto a hot plate
・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin

2-17-1. Chilling Adhesion Process Station : CADH (4-14)(4-15)(4-24)(4-25)(4-34)(4-35)

・ Temperature Range	50.0 - 180.0 °C (Set in a minimum unit of 0.1 °C)
・ Dual Band Temperature Monitoring Temp. Range to be Warned	Possible to set in Recipe --- Warned
Temp. Range to be Suspended	Possible to set in Recipe --- Alarm + Station Suspended
Temp. Range possible to be Set	± 0.1 to ± 25.0 °C (Set in a minimum unit of 0.1 °C) Note) Depending on the temperature accuracy of the plate, range of actual minimum set value may be limited.
・ Processing Method	HMDS vapor process and temperature control using hot plate
・ Hot Plate Heating Method	Using 1ch concentric circle patterned P.I.D. control
・ Hot Plate Process Method	Proximity (0.1 mm) Using gap pin
・ Hot Plate Wafer Guide	A circular cylinder-shaped guide prevents displacement of wafers When they are placed onto a hot plate

・ Prevention of Excessive Temperature Rise	Detect overheating of Hot Plate using independent thermo-switch (Hardware Interlock)
・ Chill Arm Temperature Control Method	
・ Chill Arm Process Method	Proximity (0.2 mm) Using gap pin
・ Measures against HMDS-Leak	Locally exhausting air from a nearby chamber, prevent the remained HMDS from leaking to outside module.
・ HMDS VAPOR Flow Rate Monitoring	Monitoring the flow rate of HMDS vapor using mass flow meter

2-18-1. HMDS Supply

・ Facility I/F Factory Supply	None
・ Local Supply Local Supply	Present
・ Bottle Bottle	1G NOWPAK
Providing NOWPAK Probe	Customer prepares standard PROBE
・ Buffer Tank Dispense Method	Form HMDS Vapor with Skimmer Tank and send it into a chamber by pressure

2-19-1. Wafer Edge Exposure Process Station : WEE (6-15)

・ Exposure Mode	Fixed intensity exposure mode / Accumulation exposure mode
・ Exposure Shape	Round / Linear / Selective
・ Exposure Count	0 to 27 Rotations (Selectable angle : MAX 9,999 degrees)
・ Exposure Width Setting	Round : 0.1 to 10 mm (Set in a minimum unit of 0.1 mm) Linear : 0.1 to 30 mm (Set in a minimum unit of 0.1 mm)
・ Light Source Lamp	250 W ultra high pressure mercury lamp
・ Light Amount Adjusting Range	0 to 100 %
・ Illumination Check	1. After every wafer in 2. At every lot start. 3. At every specified interval 1 to 99,999 min. (Set in a minimum unit of 1 min.) 4. No Check Select a Recipe from above
・ Chuck Shape	Concentric circles
Chuck VAC Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Wave Capable	Deep UV (254 nm)
・ Aparture Shape/Size	4 mm * 10 mm sector form

2-20-1. Wafer Edge Exposure Process Station + Bare-Si Thickness Monitor : BWEE (6-25)

・ Exposure Mode	Fixed intensity exposure mode / Accumulation exposure mode
・ Exposure Shape	Round / Linear / Selective
・ Exposure Count	0 to 27 Rotations (Selectable angle : MAX 9,999 degrees)
・ Exposure Width Setting	Round : 0.1 to 10 mm (Set in a minimum unit of 0.1 mm) Linear : 0.1 to 30 mm (Set in a minimum unit of 0.1 mm)
・ Light Source Lamp	250 W ultra high pressure mercury lamp
・ Light Amount Adjusting Range	0 to 100 %
・ Illumination Check	1. After every wafer in 2. At every lot start. 3. At every specified interval 1 to 99,999 min. (Set in a minimum unit of 1 min.) 4. No Check Select a Recipe from above
・ Chuck Shape	Concentric circles
Chuck VAC Sensor	Pressure sensor with digital display (Alarm band can be set.)
・ Wave Capable	Deep UV (254 nm)
・ Aparture Shape/Size	4 mm * 10 mm sector form
・	
・	Resist 150-10000nm 、 TARC,BARC 20～500nm

2-21-1. Interface Block Sub : IFBS (6)

・ Wafer Transport Method	One fork robotics transport method (X1, Y, Z, and Theta)
・ Wafer Sensor	Detecting presence/absence of wafer on the fork and also wafers placed out of it.
・ Exposure	NXT-1950i

2-22-1. Wafer Inttelligent Scanner Inspection Module after Coating : WISC

・ Detectable defect type	uncoated, defective coating, bake error, etc.
・ Detection performance	
Detectable defect size	1000 um or larger (on WSW)
・ Stage drive	Double axis drive (X, Theta)
・ Chuck	
Shape	concentric circle
Chuck VAC Sensor	Pressure sensor with digital indicator (Alarm band settable)
・ Notch joint structure	
LED	red LED
Motion	Theta axis rotation
・ Imaging light source	
LED	white LED bar illumination
・ Camera	
Type	3 line CCD sensor CameraLink standard
・ WSW	WSW Standard Wafer - wafer which intentionally has defects (oxide pattern) for performance inspection

3.External Equipment

3-1-1. COT CABINET

・ Sub Operation Panel	Installed on the front side of this cabinet
・ Exhaust Outlet	Upward
・ Chemical Area Manual Damper (Chemical Exhaust)	Present
・ Utility Outlet	Upward

3-1-2. DEV CABINET

・ Sub Operation Panel	None
・ Exhaust Outlet	Upward
・ Chemical Area Manual Damper (Chemical Exhaust)	Present
・ Utility Outlet	Upward

3-2-1. SYSTEM THC

・ Line Outlet	Rear
・ T&H Air Duct Outlet	Vertical outlet
・ Drain Pumping	When the factory-side drain line is located higher than THC, THC drain is pumped up there, using a pump
・ Type of Terminal for Main Breaker	solder-less terminal (US)
・ Chemical Filter	Option (Ion exchange type： 4-year-lifespan)

3-3-1. AC POWER BOX

・ AC Power Box Safty Regulation	
・ Customer Power Supply Voltage	208V
・ Type of Terminal for Main Breaker	solder-less terminal (US)
・ Cable Outlet (Primary-side)	Upward
・ Cable Outlet (Secondary-side)	Upward

4.Safety

4-1-1. Safety Signal

・ Emergency Stop Signal Input	Present (Power OFF)
・ I/F Form	Terminal Block (WAGO)
・ I/F (Terminal Block) Location	COT CABINET

4-2. Alarm Lamp

・ ALarm Lamp/Location	Present (1 piece: Location - Upper part of Carrier Station)
・ Lamp Type 1st one (From the top)	Red
2nd one (From the top)	Yellow
3rd one (From the top)	Green
4th one (From the top)	Blue
・ Lighting Specifications	Comply to customer requirement.

5.SoftWare

5-1. SoftWare

・ Online	Present
Online Communication Method	HSMS
・ Ingenio GL Applicable	Present
・ System Interlock / Interlock Level COT RESIST	Stop next wafer in next cassette
・ System Interlock / Interlock Level BCT RESIST	Stop next wafer in next cassette
・ System Interlock / Interlock Level HMDS	Stop next wafer in next cassette
・ System Interlock / Interlock Level WEE (BWEE,BWEH)	Stop next wafer in next cassette
・ <<Standard SoftWare>>	Present
・ Dummy Dispense Dummy Dispense Function	Present
Skip Dummy Dispense Process	Present
・ Recipe In-Use Recipe Edit Function	Present
Specify Spin Off Speed to Plural Steps	Present
Recipe Security Function	Present
・ Operation Stop by Carrier Function	Present
Carrier Stage Operation Switch	Present
・ Automatic Check Communication Error Detection between EC and MC	Present
・ Alarm Warning Output at Transfer Arm Pause	Present
・ Transfer Control Module Status Check Function	Present
PJ Start Delay Alarm Function	Present
Coating Flow Overbake Prevention	Present
WEE in Near-ready Function	Present
Overhead Time Reduction by Dnstrm OK wait (LOK) at Spinner	Present
Stop Lot Send OUT at Hot Plate Temperature Change	Present
Stop Lot Send OUT at Resist Temperature Change	Present
IFB Asynchronous Control	Present
System Interlock	Present
Process Recipe Sent in Advance Function	Present
Notify Time to Replace Chemical, etc.	Present
High Speed Temp. Change HP with Cascade Process	Present
High Speed Temp. Change Resist with Cascade Process	Present
・ Module WEE Alignment Error Auto retry	Present
・ Signal Tower Signal Tower Control Function	Present
Buzzer Auto Stop Function	Present
・ Stepper I/F Rejected Wafer Retrieval Function	Present
Wafer Retrieval Function in Stepper at Initial	Present
・ Online ARAMS	Present
・ Interlock Level ITC RESIST	Stop Next Wafers in Next Cassettes

6.Option

6-1. Option

・ Spinner Internal Lighting	Present
・ Service Outlet	Present
COT Cabinet	Present (AC100V, 2 sockets)
・ Adjuster Foot Bottom Board-PRB	Present
・ Adjuster Foot Bottom Board-External Rack	Present
・ LITHIUS Back Utility Kick Guard	Present

6-2. Common Label

・ Label Language	English (See below for warning labels)
・ Label Language	English/German
・ CE Marking Label	None

7.Utility

7-1-1. CSS(Common)

・ I/F type	Terminal Block (WAGO)
・ I/F (Terminal Block) area	COT Cabinet and DEV Cabinet (1)

If you have any question regarding your special specification, which is not specified in this specification document, please ask to our contact person.

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