4. System outline & configuration.

Note the following pages need to be completed for each chamber if an ASPECT system is specified.

4.1. System overview

System overview					
System Type	X Multiplex	☐ MACS	☐ ASPECT	☐ 308PC ☐ 310PC ☐ 320PC	
Handling Type of loadlock	☐ Carousel loadlock ☐ Carousel loadlock with atmospheric cassette X Single Wafer loadlock ☐ Vacuum Cassette (Number of Vacuum Cassettes ☐ 1 ☐ 2) ☐ Open-load				
Process Modules Number of Process Modules	X 1 ☐ 2 ☐ 3 ☐ 4				
Process Module Details	Module 1	Module 2	Module 3	Module 4	
Module Type	X ASE^{SR} ☐ASE^{HRM} ☐ ICP ☐ AOE ☐ RIE ☐ PECVD ☐ Other (specify)	☐ ASE^{SR} ☐ ASE^{HRM} ☐ ICP ☐ AOE ☐ RIE ☐ PECVD ☐ Other (specify)	☐ ASE^{SR} ☐ ASE^{HRM} ☐ ICP ☐ AOE ☐ RIE ☐ PECVD ☐ Other (specify)	☐ ASE^{SR} ☐ ASE^{HRM} ☐ ICP ☐ AOE ☐ RIE ☐ PECVD ☐ Other (specify)	
Process Type	Polymers				
Port Number (ASPECT)					

4.2. Power and electronics.

POWER & ELECTRONICS	
System Voltage Supply (V/Hz)	208V 60Hz No N
Electronics Rack Location **Note: Standard cable length from electronics rack to system 6m (20ft).**	Standard layout proposed to the customer. See dwg no. GARR3240

4.3. Gas Box details.

GAS BOX AND GAS LINES		
Gas box type (onboard or remote)	X Onboard ☐ Remote	If remote, gas box location? **Note: Mixed gas line on ASE system with remote gas box must be <3m (10ft) long and a max. of 4 bends.**
If remote, specify if left or right handed model required.	☐ Left-handed ☐ Right-handed (Either will work)	

Specified Gas Lines

		Gas Name	MFC Size (sccm)	Normalized (Yes/No)	Seal Type	Gas Type (process/ clean)
	Gas Line	C4F8	200	Yes	Viton	C
	Gas Line	SF6	300	Yes	Viton	C
	Gas Line	O2	100	No	Viton	C
	Gas Line	Ar	50	No	Viton	C/P
	Gas Line	CHF3	100	No	Viton	C/P
	Gas Line	CF4	100	No	Viton	C/P
	Gas Line	CO2	100	No	Viton	C/P
	Gas Line					
	Gas Line					
	Gas Line					
	Gas Line					
	Gas Line					
	Gas Line					
	Gas Line					

Note: Gas lines are not in the exact order that they are fitted in the gas box. This information can be provided at a later date.	**Note: Onboard mini gas box has a maximum of 8 lines. Onboard maxi and remote gas boxes have a maximum of 16 lines (maximum 12 different gas types). Purged gas lines count as two lines.**

4.4. Chillers & cooling.

CHILLERS AND COOLING CIRCUIT			
Upper Electrode Chiller		Location/ Cable Length/Pipe length	
Lower Electrode Chiller	Affinity RWA-012	Location/ Cable Length/Pipe length	Standard layout proposed to the customer. See dwg no. GARR3240
Additional Chiller / heaters		Location/Cable Length/Pipe length	
Note: Standard cable length from electronics rack to pumps/chiller is 10m (33ft). Standard cooling pipe length from chiller to system is 4m (13ft).		Standard layout proposed to the customer. See dwg no. GARR3240	

4.5. Pumps and Pumping lines

Pumps and Pumping lines				
		Turbo Pump	**Chamber Backing Pump**	**Loadlock Pump**
Pump Manufacturer		Leybold	Edwards	Varian
Pump Model		MAG900	iH80 (M)	TS600
Distance from	Process Chamber	**N/A**		**N/A**
	Load lock	**N/A**	**N/A**	
Pumping Line Size	Process Chamber			**N/A**
	Load lock	**N/A**	**N/A**	
Note: As standard STS supplies 1m of pumping line for backing pumps.				
Pump Required Date (if customer supplied) **Note: System may be delayed if pumps do not arrive at STS UK by this date.**		**Turbo pump can only be supplied by STS**		

4.6. Wafer Handling.

Wafer Handling				
	Option 1	**Option 2**	**Option 3**	**Option 4**
Direct wafer handling or sub-carrier handling?	Direct			
If wafer handling				
WTC / ESC	WTC			
Material	Silicon			
Size	100mm			
Thickness	Standard			
clamped/unclamped	Clamped			
pin lift/tripod lift/boss lift/edge lift	Pin Lift			
number of wafers on carousel (multiplex systems only – standard =2)	Single wafer only			
If sub-carrier handling				
Carrier size				
Carrier coating				
Carrier material				
Number of sub-carriers required				
Wafer material				
Wafer size				
Thickness				
Clamped/unclamped				
Single/batch + number of wafers				

4.7. EPD Requirements.

END POINT DETECTION SYSTEM.		
Is an endpoint detection system required? **Note: Please review in conjunction with specifications on the following page.**	☐ Yes X No	
Manufacturer and Model Number		
Are wafers required for proof of concept?	☐ Yes X No	Refer to section 9.3

12. Appendix 2: System confuguration outline.

Item	Qty	Code	Description	Price US $
1	**1**		**Multiplex[RD] ICP System with Reconditioned process chamber for general etching of polymers, silicon and oxides with Vacuum Load Lock**	**See below**
	1		**Control System and User Interface**	
	1	A90	Windows 2000 software control PC with CD-RW	
	1	A85	Standard Control System	
	1	M21	Standalone VDU, keyboard and mouse	
	1	PR	Parameter Ramping Software	
	1		**Vacuum Load Lock with single wafer loader**	
	1	SWL	Vacuum Load-Lock with single wafer loader	
	1	L04	Load lock parts for 1 x 100mm wafer	
	1	PLL	New – Pump for loadlock	
	1		**Reconditioned ICP-SR Process Module**	
	1	R85	ICP SC160M Process Chamber (MESC)	
	1	H15	ICP 240BF Source (exc. PSU and Matching)	
	1	S27	1 KWatt (13.56 MHz) RF Supply and Matching Unit (for ICP source)	
	1	BC	Balun coil ICP design	
	1	R49	Moving Mechanical Wafer Clamping Electrode (pin lift) with He Backside cooling	
	1	W44	Chamber parts for 1 * 100mm substrate (Mechanical Clamping)	
	1	S26	300/30 Watt (13.56 MHz) RF Supply and Matching Unit (for lower electrode)	
	1	K67	NEW - Electrode Temperature Control (+5 to +40 deg C)	
	1	G01	On-board mini gas box (max 8 lines)	
	4	G12	Gas Line(s) - Non Hazardous -SF6, C4F8, O2, Ar	

	4	G12	Gas Line(s) - Non Hazardous -SF6, C4F8, O2, Ar
	1	Y41	Turbo Pump: Leybold MAG turbo
	1	Y45	New - Dry Pump: Edwards iQDP80(M)
	1		Bosch License
			Additional Gas line options
2	1	G12	3 x Additional gas lines for the following gases including -3 x G12 gas lines for; - CHF3, CF4 and N2 (or Spare) -Gas Line Control Module for 4 gas lines