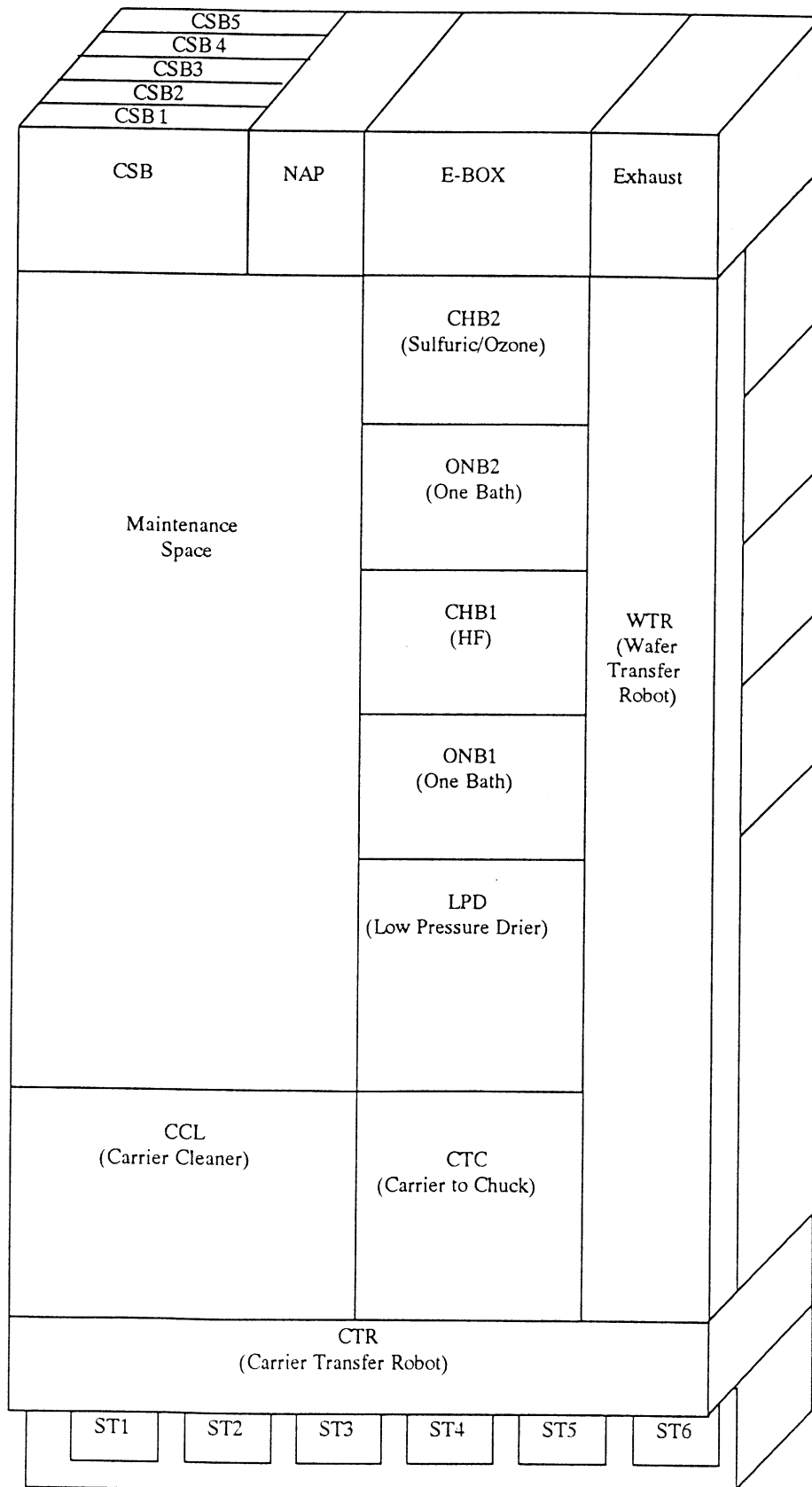


3. Device Configuration

FC-821L



4. Basic Specifications

Device Name	FC-821L										
Carrier Used $\phi 8''$	Model No.	XT203-05					Material	P.P			
Wafer Used ($\phi 8''$)	Dia.	$\phi 200 \pm 0.5$ mm		Thickness	725 \pm 50 μ m		Accommodates 25 wafers				
Chemical Used	CSB1	NH ₃ OH	CSB2	H ₂ O ₂	CSB3	HF	CSB4	H ₂ O ₂	CSB5	HCL	
Device Size	Width	2790 mm	Depth	4120 mm	Height	2843 mm					
Device Weight	Approx. 4,500 kg <i>7,900 lb</i> <i>9ft4 in</i>										
Clean Unit	99.999% (min) at 0.1 - 0.15 μ m										
Option Unit(s)											
Carrier Cleaning											
D-Sonic	Attached to ONB.										
Hot Water Unit	105 Kw (Lufran)										
Wafer Count Check	Attached to stage 5, 6.										
Remarks	<p>1) Dimensions are millimeters.</p> <p>2) The device weight is the dry weight.</p> <p>3) Drawing Supplied</p> <ul style="list-style-type: none"> • Specification Sheet • 5-E1-01005 ; FLOW SHEET • 5-E3-00632 ; FLOW SHEET (CSB UNIT) • 5-E2-00350 ; FLOW SHEET (CSU) • 5-E3-00645 ; FLOW SHEET (IPA SUPPLY UNIT) • 5-E4-00448 ; FLOW SHEET (OZONE VALVE BOX) • 5-D1-04461 ; OVER VIEW • 5-D1-04457 ; UTILITY (1/3) • 5-D1-04458 ; UTILITY (2/3) • 5-D2-01531 ; UTILITY (3/3) • 5-D2-01532 ; UTILITY (CSU) • 5-D2-01533 ; UTILITY (CSU) • 5-D2-01534 ; UTILITY (CSU) • 5-D2-01535 ; UTILITY (CSU) • 5-D2-01536 ; UTILITY (CSU) • 5-D2-01537 ; UTILITY (IPA SUPPLY UNIT) • 5-D2-01540 ; UTILITY (HOT DIW UNIT) • 5-D2-01538 ; UTILITY (OZONE WATER GENERATOR) • 5-D2-01539 ; UTILITY (OZONE GENERATOR) • 5-D3-00671 ; UTILITY (OZONE VALVE BOX) • 5-D1-04462 ; STAND ALONE UNIT • 5-D1-04463 ; LAYOUT • 5-D1-04473 ; ADJUSTABLE BOLT • 5-D1-04455 ; INTERFACE SMIF 										

5. Utility List

FC-821L

Utility Name (unit)	Function Name	Unit													
		CHB2 (Sulfuric /Ozone)	ONB2	CHB1 (HF)	ONB1	LPD	CSB	CCL	Transfer	CSU	IPA SUPPLY UNIT	OZONE WATER GENERATOR	OZONE GENERATOR	OZONE VALVE BOX	HOT DI UNIT
DIW (l/min)	Upflow		25*1		25*1	25*1		10				25+6			25*1
	Shower		8		8										
	Chemical mixing		25*1		25*1	25*1									25*1
	Bath washing	8		5											
	Hand shower		10		10										
City Water (l/min)		40													
Cooling Water (l/min)				5								7			
NH ₄ OH (l/min)								1							
H ₂ O ₂ (l/min)								1							
HF (l/min)								1							
HCL (l/min)								1							
H ₂ SO ₄ (l/min)		10													
IPA (ml/ lot)						30/350									
O ₂ (NI /min)											5	20			
N ₂ (NI/min)	Purge					100				10	1	0.2			7
	Drying							150							
	Level sensor	0.15	0.05	0.1	0.05			0.05							
	Pressure feed							10×5			10				
Air (NI/min)	Drive	150		150		30			30	150×5	3				
	Purge														
Exhaust (m ³ /min)		5	4	2	2	2+0.5 (Organic)	0.5×5			0.5×5	3	0.2	3.2	0.5	
Current (A)		3 φ 208V 175A													3 φ 480V 160A
Remarks	<p>· Maximum required quantity for each utility is shown as follows:</p> <p>*1 Upflow and mixing of DI water and upflow of room temperature water and hot water in ONB are not performed simultaneously.</p>														

6. Utilities

< Main Body >

(Max. value/1 lot)

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remark
1	DIW	OD:63×ID:57 50A socketweld union	PVDF George FIS, +GF+	OD:63×ID:57 50A Pipe	120 L/min	0.2-0.4 MPa	1	
2	HOT DIW	φ19×φ16 union (pillar)	PFA	-	25 L/min	0.2-0.3 MPa	1	ONB1,2 from HOT DIW Unit outer φ25 tube
3	City water	1" ANSI flange	PP	1" ANSI flange	40 L/min	0.2-0.4 MPa	1	CHB2
4	PCW IN	3/4" ANSI flange	PP	3/4" ANSI flange	5 L/min	0.1-0.15 MPa	1	CHB1
5	PCW OUT	3/4" ANSI flange	PP	3/4" ANSI flange	-	max. 0.05 MPa	1	CHB1
6	O ₃ Water	φ19×φ16 union (pillar)	PFA	-	20 L/min	0.2 MPa	1	ONB1,2,LPD from Ozone Water Gen outer φ25 tube
7	N ₂	φ3/8" VCR (Cajon)	SUS316	φ3/8" tube	10 NI/min	0.4-0.7 MPa	1	Level sensor
8	N ₂	φ3/8" VCR (Cajon)	SUS316	φ3/8" tube	250 NI/min	0.4-0.7 MPa	1	Purge (LPD,CSB,CC)
9	N ₂	φ1/2" VCR (Cajon)	SUS316	φ1/2" tube	1100 NI/min	0.4-0.7 Mpa	1	Purge (Out port)
10	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	420 NI/min	0.4-0.7 Mpa	1	For drive
11	O ₃ GAS	φ3/8" union (Pillar)	PFA	-	120 g/h	0.05 MPa	1	CHB2 from Ozone Valve Box outer 2 sus flexible tube
12	CHEMICAL 1	φ1/2" union (Pillar)	PFA	-	-	max. 0.3 MPa	1	NH ₄ OH From C outer φ3/4" tube
13	CHEMICAL 2	φ1/2" union (Pillar)	PFA	-	-	max. 0.3 MPa	1	H ₂ O ₂ From CSU outer φ3/4" tube
14	CHEMICAL 3	φ1/2" union (Pillar)	PFA	-	-	max. 0.3 MPa	1	HF From CSU outer φ3/4" tube
15	CHEMICAL 4	φ1/2" union (Pillar)	PFA	-	-	max. 0.3 MPa	1	HCL From CSU outer φ3/4" tube
16	CHEMICAL 5	φ1/2" union (Pillar)	PFA	-	-	max. 0.3 MPa	1	H ₂ SO ₄ From CSU outer φ3/4" tube
17	CHEMICAL 6	φ3/8" union (fujikin)	SUS316	-	-	max. 0.3 MPa	1	IPA From IPA Supply Unit
18	ACID DRAIN	OD:73×ID:63.5 2-1/2" union	HT-PVC	OD:73×ID:63.5 2-1/2" pipe	-	-	1	
19	DIW RECLAIM	OD:63×ID:50 50A socketweld union	PP George FIS, +GF+	OD:63×ID:50 50A pipe	-	-	1	ONB1,ONB2,CC
20	DIW RECLAIM	OD:50×ID:40 40A socketweld union	PP George FIS, +GF+	OD:50×ID:40 40A pipe	-	-	1	LPD
21	VAT DRAIN	OD:25×ID:20 20A socketweld union	PP George FIS, +GF+	OD:25×ID:20 20A pipe	-	-	1	
22	VAT DRAIN	OD:25×ID:20 20A socketweld union	PP George FIS, +GF+	OD:25×ID:20 20A pipe	-	-	1	

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
23	IPA VAT DRAIN	φ1/4" union (fujikin)	SUS316	φ1/4" tube	-	constantly closed	1	LPD
24	IPA WITHDRAWAL	φ3/8" union (fujikin)	SUS316	φ3/8" tube	-	constantly closed	1	LPD
25	ACID EXHAUST	8" ANSI flange	PVC	φ8" pipe	11 m ³ /min	-186 Pa	1	Coupling flange
26	ACID EXHAUST	6" ANSI flange	PVC	φ6" pipe	4 m ³ /min	-186 Pa	1	Coupling flange
27	SOLVENT EXHAUST	OD:60.5×ID:57.2 2" ANSI flange	SUS304	OD:60.5×ID:57.2 φ2" pipe	2 m ³ /min	-186 Pa	1	Coupling flange
28	ACID EXHAUST	OD:63×ID:50 50A socketweld union	PP George FIS, +GF+	OD:63×ID:50 50A pipe	1.5 m ³ /min	-186 Pa	1	CSB
29	ACID EXHAUST	OD:63×ID:50 50A socketweld union	PP George FIS, +GF+	OD:63×ID:50 50A pipe	1.0 m ³ /min	-186 Pa	1	CSB
30	POWER SUPPLY	3φ 208 V	-	-	175 A	-	1	

< CSU (NH₄OH) >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
31	DIW	OD:25×ID:21.2 20A socketweld union	PVDF George FIS, +GF+	OD:25×ID:21.2 20A pipe	-	0.2 - 0.4 MPa	1	
32	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	150 NI/min	0.4-0.7 MPa	1	
33	CHEMICAL OUT	φ1/2" union (Pillar)	PFA	-	-	-	1	To CSB outer φ3/4" tube
34	VAT DRAIN	OD:20×ID:15 15A socketweld union	PP George FIS, +GF+	OD:20×ID:15 15A pipe	-	-	1	
35	ACID EXHAUST	2" ANSI flange	PVC	φ2" pipe	0.5 m ³ /min	-186 Pa	1	Coupling flange
36	POWER SUPPLY	1φ 100 V	-	-	3.0 A	-	1	From main body

< CSU (H₂O₂) >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
37	DIW	OD:25×ID:21.2 20A socketweld union	PVDF George FIS, +GF+	OD:25×ID:21.2 20A pipe	-	0.2 - 0.4 MPa	1	
38	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	150 NI/min	0.4-0.7 MPa	1	
39	CHEMICAL OUT	φ1/2" union (Pillar)	PFA	-	-	-	1	To CSB outer φ3/4" tube
40	VAT DRAIN	OD:20×ID:15 15A socketweld union	PP George FIS, +GF+	OD:20×ID:15 15A pipe	-	-	1	
41	ACID EXHAUST	2" ANSI flange	PVC	φ2" pipe	0.5 m ³ /min	-186 Pa	1	Coupling flange
42	POWER SUPPLY	1φ 100 V	-	-	3.0 A	-	1	From main body

< CSU (HF) >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
43	DIW	OD:25×ID:21.2 20A socketweld union	PVDF George FIS, +GF+	OD:25×ID:21.2 20A pipe	-	0.2 - 0.4 MPa	1	
44	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	150 NI/min	0.4-0.7 MPa	1	
45	CHEMICAL OUT	φ1/2" union (Pillar)	PFA	-	-	-	1	To CSB outer φ3/4" tu
46	VAT DRAIN	OD:20×ID:15 15A socketweld union	PP George FIS, +GF+	OD:20×ID:15 15A pipe	-	-	1	
47	ACID EXHAUST	2" ANSI flange	PVC	φ2" pipe	0.5 m ³ /min	-186 Pa	1	Coupling flan
48	POWER SUPPLY	1φ 100 V	-	-	3.0 A	-	1	From main bo

< CSU (HCL) >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
49	DIW	OD:25×ID:21.2 20A socketweld union	PVDF George FIS, +GF+	OD:25×ID:21.2 20A pipe	-	0.2 - 0.4 MPa	1	
50	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	150 NI/min	0.4-0.7 MPa	1	
51	CHEMICAL OUT	φ1/2" union (Pillar)	PFA	-	-	-	1	To CSB outer φ3/4" tu
52	VAT DRAIN	OD:20×ID:15 15A socketweld union	PP George FIS, +GF+	OD:20×ID:15 15A pipe	-	-	1	
53	ACID EXHAUST	2" ANSI flange	PVC	φ2" pipe	0.5 m ³ /min	-186 Pa	1	Coupling flan
54	POWER SUPPLY	1φ 100 V	-	-	3.0 A	-	1	From main bo

< CSU (H₂SO₄) >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
55	DIW	OD:25×ID:21.2 20A socketweld union	PVDF George FIS, +GF+	OD:25×ID:21.2 20A pipe	-	0.2 - 0.4 MPa	1	
56	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	150 NI/min	0.4-0.7 MPa	1	
57	CHEMICAL OUT	φ1/2" union (Pillar)	PFA	-	-	-	1	To CSB outer φ3/4" tu
58	VAT DRAIN	OD:20×ID:15 15A socketweld union	PP George FIS, +GF+	OD:20×ID:15 15A pipe	-	-	1	
59	ACID EXHAUST	2" ANSI flange	PVC	φ2" pipe	0.5 m ³ /min	-186 Pa	1	Coupling flan
60	POWER SUPPLY	1φ 100 V	-	-	3.0 A	-	1	From main bo

< IPA Supply Unit >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
61	IPA OUT	PT3/8" female	SUS304	-	10 L/min	0.1 - 0.2 MPa	1	
62	N ₂	φ3/8" union (swagelok)	SUS316	φ3/8" tube	10 NI/min	0.4-0.7 MPa	1	For IPA pressure air
63	N ₂	φ3/8" union (swagelok)	SUS316	φ3/8" tube	10 NI/min	0.4-0.7 MPa	1	Purge
64	CDA	φ3/8" union (swagelok)	SUS316	φ3/8" tube	3 NI/min	0.4-0.7 MPa	1	For drive
65	IPA VAT DRAIN	NPT1/4" female (Kitamura valve)	SUS316	NPT1/4" male	-	-	1	
66	SOLVENT EXHAUST	OD:101.6×ID:97.4 4" flange	SUS304	OD:101.6×ID:97.4 φ4" pipe	3 m ³ /min	-186 Pa	1	Coupling flange
67	POWER SUPPLY	1φ 100 V	-	-	3.0 A	-	1	From main body

< HOT DIW Unit >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
68	DIW	OD:25×ID:21.2 20A socketweld union	PVDF George FIS, +GF+	OD:25×ID:21.2 20A pipe	25 L/min	0.2 - 0.4 MPa	1	
69	HOT DIW OUT	φ3/4" union (flaretek)	PFA	-	25 L/min	0.25-0.3 MPa	1	To main body outer 1" tube
70	N ₂	φ1/4" union (flaretek)	PFA	φ1/4" tube	7 NI/min	0.14-0.28MPa	1	
71	DIW RECLAIM	φ1/2" union (flaretek)	PFA	φ1/2" tube	-	-	1	
72	VAT DRAIN	φ1/4" union (flaretek)	PFA	φ1/4" tube	-	-	1	
73	POWER SUPPLY	3φ 480 V	-	-	160 A	-	1	

< Ozone Water Generator >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
74	DIW	φ3/4" union (flaretek)	PFA	φ3/4" tube	25 L/min	0.2 - 0.4 MPa	1	
75	DIW	φ3/8" union (Swagelok)	SUS316	φ3/8" tube	6 L/min	0.2 - 0.4 MPa	1	Cooling water in
76	OZONE WATER OUT	φ3/4" union (Pillar)	PFA	-	20 L/min	0.2 MPa	1	To main body outer 1" tube
77	N ₂	φ1/4" union (Swagelok)	SUS316	φ1/4" tube	MAX 1 NI/min	0.7 MPa	1	
78	O ₂	φ1/4" union (Swagelok)	SUS316	φ1/4" tube	MAX 5 NI/min	0.7 MPa	1	
79	CDA	φ1/4" union (swagelok)	SUS316	φ1/4" tube	-	0.7 MPa	1	
80	ACID DRAIN	OD:1.66"× ID:1.25" 1-1/4" pipe	PVC	OD:1.66"× ID:1.25" 1-1/4" socket	-	-	1	Ozone water drain
81	ACID DRAIN	φ1/4" union (flaretek)	PFA	φ1/4" tube	40 L/h	-	1	Monitor drain

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
82	DIW RECLAIM	φ3/8" union (swagelok)	SUS316	φ3/8" tube	-	-	1	Cooling water
83	VAT DRAIN	φ1" socket	PVC	φ1" pipe	-	-	1	
84	ACID EXHAUST	2" ANSI flange	SS400	2" ANSI flange	0.2 m ³ /min	-186 Pa	1	
85	POWER SUPPLY	3φ 200 V	-	-	10 A	-	1	From main bo

< Ozone Generator >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
86	OZONE OUT	φ3/8" union (Swagelok)	SUS316	φ3/8" tube	120 g/h	0.05 MPa	1	To O ₃ Valve E outer NPT3/4" female
87	PCW IN	NPT1/2" female	SUS304	NPT1/2" male	6-7 L/min	0.1 - 0.15 MPa	1	
88	PCW OUT	NPT1/2" female	SUS304	NPT1/2" male	-	max. 0.05 MPa	1	
89	O ₂	φ1/4" VCR (cajon)	SUS316	φ1/4" tube	10-20 NI/min	0.4-0.7 MPa	1	
90	N ₂	φ1/4" VCR (cajon)	SUS316	φ1/4" tube	0.2 NI/min	0.4-0.7 MPa	1	
91	ACID EXHAUST	OD:100×ID:96 φ100 pipe	SUS304	OD:100×ID:96 φ100 pipe	3.2 m ³ /min	-186 Pa	1	
92	POWER SUPPLY	1φ 200 V	-	-	3 KVA	-	1	From main bo

< Ozone Valve Box >

No.	Name	Screen side connection	Material	Client side connection	Capacity	Supply pressure	Q'ty	Remarks
93	O ₃ GAS IN	φ3/8" union (pillar)	PFA	φ3/8" tube	120 g/h	0.05 MPa	1	From Ozone Generator outer NPT3/4" female
94	O ₃ GAS OUT	φ3/8" union (pillar)	PFA	-	120 g/h	0.05 MPa	1	To mein body outer 20A sus flexible tube
95	ACID EXHAUST	OD:60.5×ID:57.2 2" ANSI flange	SUS304	OD:60.5×ID:57.2 φ2" pipe	0.5 m ³ /min	-186 Pa	1	Coupling flange

Note:1) The utilities with circled number are supplied at your factory.