



Operation Speed: 0.8m/min

- 1 DI/CITY WATER TUBE
- 2 CHEMICAL WATER TUBE (DRAIN)
- 3 WATER TUBE (DRAIN)
- 4 1000mm WIDTH AREA RESERVED FOR MAINTENANCE



Universal P.C.B. Equipment Co., Ltd.

Name	Chemical Cleaning Machine			
Design	LY.Fang	25/Feb/15	Model	15SCM08DNA01
Ratify			Drawing No	



Chemical Cleaning Machine

(A) SCHEMATIC

Input->Degreasing->Cascade WR/S(1)->Fresh WR/S->Micro Etching->Cascade WR/S(2)->Acid Rinse->Cascade WR/S(3)->Cascade WR/S(4)->DI WR/S->Sponge Squeeze->Drying Module->Output

(B) SPECIFICATIONS

- | | |
|------------------------------|---|
| 1) Outer dimensions: | 7175mmL×2177mmW×2631mm±25mmH |
| 2) Panel size: | i) 610mm×610mm [Max]
ii) 200mm×200mm [Min]
iii) 0.05~2.5mm [Thickness] (Not include copper) |
| 3) Aspect Ratio | i) 10:1 [Through hole][hole≥Φ0.25mm] |
| 4) Conveyor speed: | 0.5~2.5m/min (adjustable) [Operation Speed:0.8m/min] |
| 5) Conveyor height: | 1100±25mm |
| 6) Conveyor width: | 760mm [Effective width:630mm] |
| 7) Roller diameter: | Φ32mm |
| 8) Roller distance: | 25mm |
| 9) Power supply requirement: | 3 Phase 380V AC 50Hz 33kW (Rated)(power of heater 19 kW) |
| 10) Power consumption: | 12.9~16.2 kWh |
| 11) Water consumption: | 6~8L/min [City Water]
6~8L/min [DI Water]
17L/min [Cooling Water]
pressure of cooling water(water-in):2.0~3.0bar, temperature(water-in):8~10°C |
| 12) Exhaust capacity: | 8.4m ³ /min [Drying Module]
5.6m ³ /min [Non-Drying Module] |
| 13) Control Box: | Use PLC control and Touch Screen Display |
| 14) Input Direction: | From left to right [Front view] |
| 15) Exhaust Pipe Quantity: | 1 set |



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16) Drainage Pipe Quantity: 3 for chemical, 1 for water

Remarks

1. The tolerance for machine outer dimensions is $\pm 100\text{mm}$, excluding piping
2. The <Panel Transportation Report> acts as an acceptance criteria
3. FR4 core, H/H oz copper, With 10mm length away from the panel edge
4. According to the board thickness, the spray pressure need to be adjusted
5. From Degreasing to Cascade WR/S(1), all the metal material should be SST
6. From Micro-etching to Cascade WR/S(4), all the metal material should be Ti
7. CE declaration is included
8. Including 415V – 380V step-down transformer X 1 set
9. Including 10mm thickness PVC Drip Tray (Size: 6500mmL X 2000mmW)

(C) CHEMICAL DATA (ONLY FOR REFERENCE)(COUNTED BY 0.8M/MIN)

- 1 Degreasing 30sec(Effective Length 406mm) 35~45°C
- 2 Micro Etching 53sec(Effective Length 700mm) 30~40°C
- 3 Acid Rinse 28sec(Effective Length 370mm) Room temperature

(D) CAPACITY (ONLY FOR REFERENCE)(COUNTED BY 0.8M/MIN)

- 1) Panel Size: total output based on 18"×24"(460×610)
- 2) Distance: 100mm between of two panels
- 3) Operation Speed: 0.8m/min
- 4) Output(pcs/hour): $800 \div (460 + 100)\text{mm} \times 60\text{min}$ 85pcs/hour
- 5) Output(pcs/day): 85×20hours 1700pcs/day
- 6) Output(pcs/month): 1700×26days 44200pcs/month
- 7) Output(ft²/month): $44200 \times 3.0\text{ft}^2 \times 80\%$ 106080ft²/month or 9900m²/month



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Continue List:

	Module	Filtration System					Thermostat System			Exhaust		Remark
		Filter Material	Filter Qty	Core Precision	Core Qty	Filter	Heater Cooler	Material	Thermostat	Diameter	Qty	
1	Input	-	-	-	-	-	-	-	-	-	-	Photoelectric Sensor 2Sets Emergency Stop 1Set
2	Degreasing	UPVC	1	-	Cartridge	Tank	4Kw×1PCS Φ19mm ×6m	SST SST	Digital	3"	1	Overheat protection x1Set Φ2"×10"L3pcs cartridge filters prepared by buyer
	Cascade WR/S(1)	UPVC	1	-	Cartridge	Tank	-	-	-	-	-	Φ2"×10"L3pcs cartridge filters prepared by buyer
	Fresh WR/S	-	-	-	-	-	-	-	-	-	-	2-15L/min Flow meter x1Set Φ1/2" Solenoid valve × 1Set Flux 6~8L/min
3	Micro Etching	UPVC	1	-	Cartridge	-	6Kw×1PCS Φ19mm ×6m	Ti Ti	Digital	3"	2	Overheat protection x1Set Φ2"×20"L4pcs cartridge filters prepared by buyer Squeeze (2top/ 2bottom) 1Set (Output position)



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	Module	Filtration System				Thermostat System			Exhaust		Remark		
		Filter Material	Filter Qty	Core Precision	Core Qty	Filter	Heater Cooler	Material	Thermostat	Diameter		Qty	
4	Cascade WR/S(2)	UPVC	1	-	Cartridge	Tank	-	-	-	-	-	Φ2"×10"L3pcs cartridge filters prepared by buyer	
	Acid Rinse	UPVC	1	-	Cartridge	Tank	-	-	-	3"	1	Φ2"×10"L3pcs cartridge filters prepared by buyer	
	Cascade WR/S(3)	UPVC	1	-	Cartridge	Tank	-	-	-	-	-	Φ2"×20"L4pcs cartridge filters prepared by buyer	
	Cascade WR/S(4)	UPVC	1	-	Cartridge	Tank	-	-	-	-	-	Φ2"×10"L3pcs cartridge filters prepared by buyer	
	DI WR/S	-	-	-	-	-	-	-	-	-	-	-	2-15L/min Flow meter x1Set Φ1/2" Solenoid valve × 1Set Flux 6~8L/min
	Sponge Squeeze	-	-	-	-	-	-	-	-	-	-	-	Sponge Squeeze (2 top/ 2bottom) x1Set Immersion trough of Sponge Squeeze × 1Set



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	Module	Filtration System					Thermostat System			Exhaust		Remark
		Filter Material	Filter Qty	Core Precision	Core Qty	Filter	Heater Cooler	Material	Thermostat	Diameter	Qty	
5	Drying Module	-	1	5 μm	Air Filter	-	-	-	-	4"	1	-
		-	1	5 μm	Air Filter	-	3KW x3PCS	SST	Digital	4"	1	Overheat protection x1Set
	Output	-	-	-	-	-	-	-	-	-	-	Emergency Stop x1Set Static electricity removal x1Set



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Remarks:

Basic spare parts will be provided for maintenance used (1 set)

*The descriptions of parts in attached table may be different, Please in kind prevail.

Customer:

Chemical Cleaning Machine

No.	Part No	Item	Specification	Qty
1	20010713012	O-Ring of Spray Bar	Φ25×4H(mm)	5PCS
2	20010713214	O-Ring of Quick Spray Nozzle	ID12×3(mm)	10PCS
3	20010903020	G3 Grade Air Filter	190mmx410mmx69mm	1PCS
4	20010903025	GT Grade Air Filter	430mmx280mmx46mm	1PCS
5	20020910004	Half Hook	35B	4PCS
6	20020911004	Full Hook	35B	4PCS
7	20031225086	Magnetic Switch	24VDC	2SETS
8	20031291002	Overheat Protection of Heat	250V/5A	2PCS
9	20031301153	Contactator	SC-E05	1PCS
10	20032810004	Fuse	5A	3PCS
11	20032810005	Fuse	8A	2PCS
12	20032810006	Fuse	10A	2PCS
13	20032810011	Fuse	2A	3PCS

14	20032810012	Fuse	3A	3PCS
15	30031601651	Micro Switch component	UCE-247(A+B+C+D+E)/Gray	2PCS
16	30060102041	Adjustable Level Switch	OD33 X300L	2PCS
17	30071003002	Sleeve of Conveyor Bearing (out)	Φ30x29.4mm	5PCS
18	30071004009	Sleeve of Conveyor Bearing (in)	UCE-131(Process)	5PCS
19	30110400101	Stand(metal module)	UCE-481B-1+359	5PCS
20	30110403011	H Cover	ID10	4PCS
21	30190501081	Mercury Switch	1.5m	1PCS
22	39990300081	Micro Switch component	UCE-247A/B/C/E+SST Spring	2PCS
23	39990401141	Ti Transmission Shaft Connector	Φ32x34mm (connectors A/B + screw) Unit Parts	1SET
24	40010101331	Green Lock Union	UCE-295(A+B)	5SETS
25	40010102191	Straight Gear	UCE-482	5PCS



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No.	Part No	Item	Specification	Qty
26	40010102912	Main Conveyor gear	UCE-298A-1	10PCS
27	40010102913	Roller Axis gear	UCE-298B-1	10PCS
28	40010103611	Roller Stand	UCE-481B-1	5PCS
29	40010200311	Flat Nozzle Cover	UCE-518	10PCS
30	40010200461	Gray Sector Nozzle Core	UCE-242-1	10PCS
31	40010200481	Blue Sector Nozzle Core	UCE-238	10PCS
32	40010208101	6"O-Ring of Top Cover	UCE-X044-1	5PCS
33	40014101351	Key	UCE-178A-1	2PCS
34	40054100205	Hose(etching)	ID15mm×1.5mmt× 470mmL	2PCS
35	40054100209	Hose(etching)	ID15mm×1.5mmt× 510mmL	2PCS



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Precaution

1. When cleaning the machine with SST material, do not use hydrochloric acid, vitriol can be used only if its concentration is less than 3%, UCE will not be responsible for replacement if corrosion of SST material is caused by using incorrect chemical.
2. Direct mixing of strong acid and alkaline in the main tank of the machine is forbidden.
3. It is forbidden to clean the high pressure rinse module with acid and alkaline, otherwise, the parts of high pressure pump will be corroded. UCE will not be responsible for replacement.
4. When using hydrochloric acid, the content of fluorine should be less than 10PPM. Otherwise, it will cause corrosion to the materials with titanium. UCE will not be responsible for it.
5. Inflammable fluid such as industrial alcohol is strictly prohibited for cleaning the machine during maintenance. Do not use high pressure water gun cleaning soft wheel disc.
6. Fresh air and cool air (temperature <math>< 25^{\circ}\text{C}</math>, relative humidity <math>< 55\%</math>, air flow rate: 5~8m³/min) should be inside electrical cabinet, UCE will not take responsibility for replacement if corrosion of metal materials in electronic unit is caused by client's inability to provide the conditions mentioned above.
7. Inspect the cooling fans of electrical cabinet and clean the filter nets periodically.
8. The exhaust air pipes cannot be connected with other exhaust pipes, UCE will not be responsible for replacement if the corrosion of pipe is caused by incorrect connection.
9. The environment in workshop should fit the condition for running the machine. If the conditions are not met, UCE will not be responsible for the problems that may occur.
10. For the equipment which cooling water is required, please provide cooling water. Temperature: 8~10°C, pressure (water-in) 2.0~3.0bar.
11. For the equipment which compressed air is required, please provide air source. Air pressure 5.0~7.0bar.
12. For the equipment which anti-oxidation is required, please use DI water or RO water to clean before drying.
13. Periodically inspect and clean the filters of cooling pipes.
14. It is necessary to wet or soak sponge rollers in water if the machine is not used frequently.
15. All the recognized specifications mentioned above exclude auxiliary equipment or facilities.



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ISO 9001:2008
Certificate No.: FM 51875



Model: 15CCP08DNA01

Date: 25-Feb-15

Panel Transportation Report

Panel thickness panel size	0.05~0.1(mm)	0.1~0.8(mm)	0.8~1.6(mm)	1.6~2.5(mm)
200x200(mm)	OK	OK	OK	OK
250x250(mm)	OK	OK	OK	OK
350x350(mm)	OK	OK	OK	OK
610x610(mm)	OK	OK	OK	OK

*The report acts as an acceptance criteria

*The normal loading distance between each panel is 100mm.

*"Normal Transportation" in table means normal production without board jam , shifting angle ≤ 5 degrees,
shifting distance ≤ 10 mm every 10m