

FRAME WORKING BEAM OVEN (Model: GCF-68)

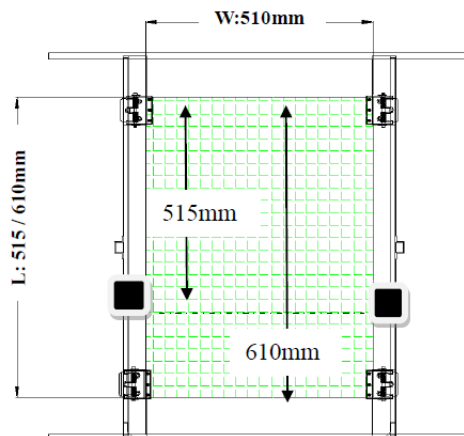
Application

For Post e-less Cu anneal / post CZ Baking (120°C/ 30min, 3pnl/min).

PCB size : **W510mm x L515mm/610mm** • Thickness: 0.1mm~2.5mm

Carrying panel direction : **Width by 510mm**

Carrying way : Receive the PCB from forward equipment, by assisting frame to support the panel
(6 points clip)



Frame clip method with Panel size

※ Tact Time=20 sec/panel (180 Panels/Hour)

※ Procedure: Horizontal loading → Horizontal frame clip & loading → Turning up → Pre-cure
→ Turning down → Frame un-clip and unloading → Horizontal unloading •

※ Loading by frame clip after auto-centering, this can match up with forward equipment such as printer and apply to various process.

※ By vacuum table to flat the panel and clip 6 points of panel by frame to avoid panel warping problem.

※ Temperature : 120°C keeping 30 min, the temperature of panel output < 50°C •

Dimension

Model	GCF-68	
Dimension	Total length	17000mm
	External width	1950mm
	External height	2684mm (Need additional keep 400mm for maintenance)
	Loading frame clip + frame turning up robot	2000mm
	Loading section(Pre-heating)	1000mm
	Heating section	8000mm
	Cooling section	2000mm
	Unloading and frame release section	4000mm
	Pass-line	1030mm+25mm
Material	Internal material by SUS430 stainless steel, Exterior by SS41 steel plate with powder paint coating • (Exterior material can be option by stainless steel)	
Pass direction	As requested.	

System

<p>Loading frame clip + frame turn up robot</p>	<ol style="list-style-type: none"> 1. By flat belt to carry PCB go into the oven's frame clip loading section. ° 2. Clapping the panel to make centering by Stepping motor ° 3. Driving by Oriental sealed motor with inverter to stepless adjust speed, Speed range 1 ~ 6 m/min adjustable ° 4. The fix-position of frame backflow is located under the machine and up to the loading position by frame lifter ° 5. Clip open by cylinder ° 6. Panel enter to oven by horizontal moving table ° 7. Clip and on frame by panel size W510mm x H515/610mm 8. Hanger robot to clip the frame and go up ° 9. By the servo of X、Z direction to carry frame and turning 90° to hang in. 10. Hanging the frame and go into the loading section of oven ° 11. Panel will be no damage、crack、pollution and no panels jammed °
<p>Oven</p>	<ol style="list-style-type: none"> 1. By Walking Beam type to move step ° 2. Move pitch =50mm ° 3. Driving by Oriental sealed motor with inverter to stepless adjust speed, Speed range 1 ~ 3 m/min adjustable ° 4. Panel will be no damage、crack、pollution and no panels jammed ° 5. By up to down flow circulation ° 6. 12" multi-wing fan with stainless tube type heater. 7. One meter with each heating section and heating control , total 8 heating sections ° 8. GP PID Temperature controller with SCR to achieve accurate setting & control. 9. Max. Temperature 250°C , keeping on 120°C / 30min. 10. Temperature uniformity ± 1.5%. 11. Loading section with pre-heating & air curtain to prevent the hot air flow out ° 12. Unloading section with cooling & air curtain to prevent the hot air flow out. 13. With solvent collecting system to reduce the solvent condensed inside the oven °

	14. Separately exhaust blower and by pass air circulation design ° 15. Insulation by glass fiber has good efficacy ° 16. With air insulation to much reduce the heating load in clean room ° 17. Each heating section with a maintenance door for easy to clean & maintenance ° 18. Electrical chamber under the machine to reduce space ° 19. The clip frame will be recycling use, and able to take out on the bottom side of machine, it's more convenient.
Insulation	Insulation by glass fiber has good efficacy and additional with air insulation to much reduce the heating load °
Cleanness	1. CLASS 1000# 2. With 99.97% at 0.3um HEPA filter °
Frame unloading robot + frame release & unloading	1. By servo turning robot to catch the clip frame and turn to be horizontal pass. 2. By fame match with cylinder to do the action of clip release & panel unload. 3. The clip points of frame located on the right & left side total 6 points ° 4. PCB output is by horizontal type °
Protective device	1. Except over temperature protector on the main Temp. controller & protecting circuit, each heating section with thermal sensor to detect the over heating to completed the best safety ° When the temperature is unusual, will bring the alarm and automatic cut-off the power system to prevent the accident ° 2. The motor with reverse phase protector, there is separately NFB on each heating section, equip with overload protection & interlock to each electrical circuit ° 3. With emergency stop switch on front & rear side. 4. Three color indicating light (RED 、YELLOW 、GREEN). 5. When unusual situation occur, there is alarm by indicating light & buzzer for easy to do trouble-shooing ° 6. With level adjuster for easy to move and installation °
Main control	1. Mitsubishi programmable controller ° 2. Digital HMI (Touch panel) *2 sets (Each one on front & rear of machine) ° 3. NFB, timer, AMP indicator, speed meter, safety SW for motor, interflow inverter , emergency button, indicating light.....various safety devices °

Utility

Power	AC400V 50HZ 3PHASE, Max. power : 117KVA °
Exhaust	Hot air : Max 32CMM -10mmAq, Dimeter:φ125mm x 8/EA Max 60CMM -10mmAq, Dimeter:φ100mm x 2/EA Max 30CMM -10mmAq, Dimension: 300mmx150mm x1/EA Normal air : Max 60 CMM -10mmAq, Dimension:170x290mm x 2/EA
CDA	5 kg/cm ² ,300 Liter/min, Φ10 quickly connector °
Cooling water	12 °C, 1/2" Pt external connector, 15 Liter/min, 2kg/cm ² °

Remark

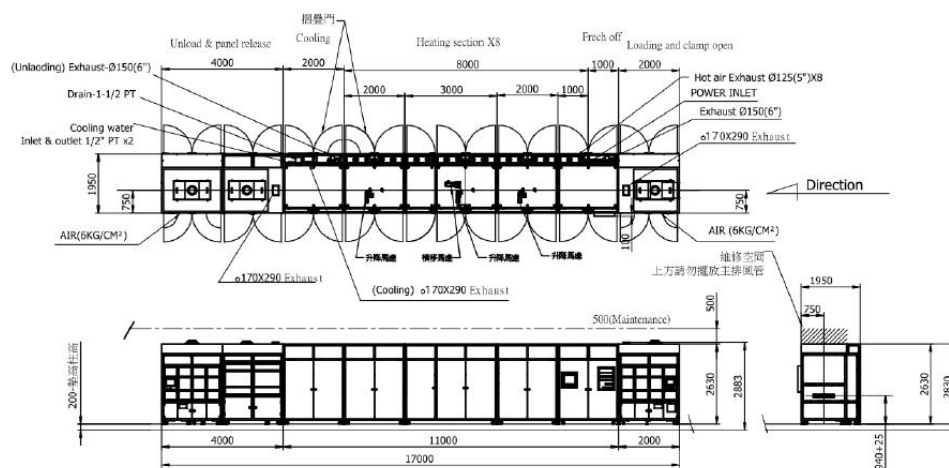
Other	1. This work no included additional pipe connection for exhaust, compressed air and power source.... ° 2. Other specification according to our manufacture standard ° 3. The actual dimension depend on the actual manufacture result ° 4. Two year guarantee °
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BQR.



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