

<b style="color: red;">Vision Inspection Ltd.		Product Evaluation Report	
China Office Tel: +86 755 29792782 & 29792783		Report No 2333PER130607V1	Page 1 of 13
Fax: +86 755 29792781		e-mail: simon@visioninspection.com.cn	

Order Information			
Customer	xxx	Model No	xxxx
Supplier	xxx	Model No	xxxx
Sample Status	1 st (2 pcs)	Description	Convection Heater
Safety Standard	<input type="checkbox"/> CE / <input type="checkbox"/> BS / <input checked="" type="checkbox"/> SAA / <input type="checkbox"/> UL / <input type="checkbox"/> CSA / <input type="checkbox"/> T / <input type="checkbox"/>		

Result	
Judgment	<input type="checkbox"/> OK <input checked="" type="checkbox"/> NG <input type="checkbox"/> Re-sample <input type="checkbox"/> Close file <input checked="" type="checkbox"/> Await Customer Decision <input type="checkbox"/> Others <input type="checkbox"/> Require supplier confirmation <input type="checkbox"/> Require follow up action (see below)
Follow up	A – 2, 3; C – 8; E – 1, 2, 3; F – 4, 5, 7.

Comments	Ver.	Suggestion	C R	M J	M I
A. Cosmetic check					
1. Packing : Individual (white box) (see photo-1)					
- Logo: Nil - Barcode: Nil - Color & printing: Nil - Label: Nil - Material: Double wall - Size: 495 x 135 x 405mm		Only white box packing. Clarify with customer the individual packing method. Clarify with customer that color & printing requirement, logo, barcode No. and whether need the "WEEE" mark for individual packing box.			
2. Packing accessories					
- Instruction manual: Nil - Guarantee card: Nil - Poly bag for unit packing: 1pc (see photo-2)					
• Main unit packing: with environmental protection mark and warning text of 11 languages and ventilation holes. • Size: 780 x 545mm.					
- Base stand (see photo-3,4)					
• Without poly bag for base stand packing.	NG	Need to add poly bag for base stand packing			√
• Color: Grey.					
- Poly bag for fixing kit.					
• Size: 105x 80mm.					
• Use the poly bag with pressed-inside opening which may easily open during transportation and make accessories in the bag dropping out. (see photo-5)	NG	Need to improve the sealing of poly bag. Suggest using shrink wrap to seal the poly bag.			√
- Mounting plate for rear unit: 2pcs (see photo-6)					
- Mounting plate for bottom unit: 1pc (see photo -7)					
- Concrete anchor: 3pcs (see photo-8)					
- Wood screw: 3pcs (see photo- 9)					
- Phillip screw: 2pcs (see photo-10)					
3. Unit					
- Labeling					
• Rating label on rear of unit. (see photo-11)					
- Marking:					
• With CAUTION text "DO NOT COVER" engraving on front of unit. (see photo-12)		Clarify with customer whether need to add approval No. and C-Tick mark on rating label.			

Evaluator: Henry Date: 2007 – 06 – (09&11)	Report By : Florence Date: 2007 – 06 – 12	Approved by: Simon Guo Date: 2007 – 06 – 13
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VIS/ISO7.5/007/A

Product Evaluation Report

Report No

2333PER130607V1

Page 2 of 13

China Office Tel: +86 755 29792782 & 29792783

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- With rated voltage, rated power input, rated frequency, model No., TUV, GS, EMC, CE mark on rating label.
- Power “O” and “ I ” mark on panel. (see photo-13)
- T.STAT “MIN” and “MAX” on panel. (see photo-14)
- Power plug
- Color: black (without protective plastic on plug pin)
- Marking: (see critical part list)
- Type: SAA
- Power Cord
- Color: black
- Marking: (see critical part list)
- Material: PVC
- Length: 165cm.
- Silkscreen color & engraving.
- Logo: Nil
- Unit color
- Outer shell: white (see photo-15~20)
- Handle: gray (see photo-21,22)
- Power switch: black (with red indication light)
- Thermostat switch: gray (see photo-23)
- Screws:
- Philip screw: 2pcs (use to fix the handle)
- Anti-temper screw: 4pcs (use to fix the outer shell)
- Unit outer shell appearance check:
- Coat on bottom of unit loose out. (1pc) (see photo-24)
- Coat on outer shell surface bulgy. (1pc) (see photo-25)
- Poor painting of inner bracket buckle position. (2pcs) (see photo-26, 27)
- Poor painting on rear inner buckle position. (can be seen clearly form outer produce) (see photo-28, 29)

NG	Need to add protective plastic on plug pin.	√
	Clarify with customer for the cord length specification.	
	Clarify with customer for the logo requirement.	
	Clarify with customer color of product.	
NG	Need to improve the coat spraying on outer shell.	√
NG	Need to improve the coat spraying on outer shell.	√
NG	Need to improve the coat spraying on outer shell.	√
NG	Need to improve the coat spraying.	√

B. Safety check

1. Earth test on $25A < 0.1\Omega$
2. Hi-pot test at $1.5KV / 0.5mA / 1Min$
3. Product rating power input test.
 - Product rating power input test at 220V at HIGH setting.
 - Product rating power input test at 230V at HIGH setting.
 - Product rating power input test at 240V at HIGH setting.
4. Surface temperature rise test: test at 1.15 times rating voltage and under $30^{\circ}C$ room temperature for 30min.
 - Product temperature rise test at MAX setting of T.STAT for 4 hours: temperature rise of power cord, handle, power switch and T.STAT knob meet the requirement of standard.

OK			
OK			
OK	Please see data test record. Clarify with customer the test result.		
OK	Please see data test record. Clarify with customer the test result.		
OK	Please see data test record. Clarify with customer the test result.		
OK			
OK			

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China Office Tel: +86 755 29792782 & 29792783 Fax: +86 755 29792781 e-mail: simon@visioninspection.com.cn		Report No 2333PER130607V1	Page 3 of 13	
5. Product tilting test: product does not overturn at an angle of 15° when placed on an inclined or horizontal surface.	OK			
6. Power cord pull test: with 5kg pull force for 1min	OK			
7. When the product work normally, sharp angle on unit and burrs on edge check.	OK			
8. Over temperature protection test:				
- Thermal cut-out on / off test: short-circuit the thermostat, thermal cut-out will automatically cut-off after about 2min, and power of main unit also cut off.	OK			
- Thermal link cut-off test: short-circuit the thermostat and thermal cut-out, thermal link cut off after about 20s, and power of main unit also cut off.	OK			
C. Functional check				
1. Power “0” and “ I ” operation check.	OK			
2. Power “0” and “ I ” indication light operation check.	OK			
3. Thermostat operation check at MIN / MAX setting.	OK			
4. Heating element working condition check.	OK			
5. Unit operation at 0.85 times and 1.24 times rating power input respectively.	OK			
6. Tape test of silkscreen	OK			
- Tape test of silkscreen on panel of unit.	OK			
- Tape test on silkscreen of warning text.	OK			
7. Burn-in test:				
- Product operation test at 230V rated voltage for 8 hours.	OK			
8. Rubbing test on rated label:				
- Use alcohol to do rubbing test on surface of rated label with force of 300g for 15 times, letter on the label was erased. (see photo-30)	NG	Need to improve the material of rating label. Suggest using UV material for the rating label.	√	
9. Base stand assembly test:				
- Use screw to fix the base stand.	OK			
- Stable degree test on base stand of unit. (see photo-31,32)	OK			
10. Mounting plate assembly test				
- Use 8 mm drill to make hole in the wall and drive in the concrete anchor, and then use the wood screw to fix the bracket and put the main unit on the bracket. (see photo-33)	OK			
D. Electrical check				
1. Technical information:				
- Power supply: 220V ~ 240V / 50Hz				
• This product is shipped to NZ / AU.				
- Rating power input: 1300-1500 W				
- Product electrical shock protection: Class I				
2. Functional				
- Power “0” and “ I ” function operation.				
- Power “ I ” indication light operation.				
- Thermostat operation at MIN / MAX setting.				
		Need to clarify with customer.		

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- Over-temperature protection operation.				
E. Mechanical check				
1. Product packing construction check:				
- Poly foam and unit assembly check.	OK			
- Poly bag and unit assembly check.	OK			
- White box and unit assembly check.	OK			
2. Main unit construction check:				
- Power switch operation check	OK			
- Thermostat operation check	OK			
- Handle operation check	OK			
- Power switch assembly construction check	OK			
- Thermostat assembly construction check	OK			
- Handle of unit assembly construction check	OK			
• Gap about 3.7- 4.0mm between handle and unit outer shell. (see photo-34~37)	NG	Need to improve handle construction		√
- Outer shell and inner body construction check.	OK			
3. Inner construction check:				
- Power cord, cable gripper construction check.	OK			
- "L", "N" and "E" wires of power cord and inner connection wire construction check:				
• "L" and "N" wires of power cord are too near to the thermal link. (Reference photo-39)	NG	Need to improve. Suggest adding a protective bushing for the "L" and "N" wires.		√
- "E" wire construction check.	OK			
- Heating element fixing on inner body construction check.	OK			
- Mica plate fixing on inner body construction check.				
• Screw gets into the mica plate, and cause the mica plate loose out. (see photo-38)	NG	Need to improve. Suggest changing for the screw with cap or adding the washer under the screw.		√
- Thermal cut-out fixing on the mica plate bracket construction check.	OK			
- Thermal link fixing on mica plate bracket construction check.	OK			
- Mica plate bracket fixing on inner body construction check.	OK			
- Label fixing on inner of power cord check:				
• Label on "N" wire of power cord missing. (see photo-39)	NG	Need to add "N" label on N wire of power cord.		√
- Thermostat fixing on inner body construction check.	OK			
- Power switch fixing on inner body construction check.	OK			
4. Accessories construction check:				
- Wall bracket fixing on outer shell construction check.	OK			
- Base stand fixing on bottom of outer shell construction check.	OK			
F. Workmanship check				
1. Power cord fixing status check:				
- Power cord fixing on outer shell status check. (see photo-40)	OK			
- Power cord and cable gripper fixing status check. (see photo-41)	OK			
2. Inner wiring collocation and fixing status:				
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- Inner wiring fixing on inner body status. (see photo-42) 3. Connection terminal fixing on heating element, power switch and thermostat check. (see photo-43~46) 4. Heating element fixing status - Distance between heating elements not even, distance between some of the heating elements is only 0.2-0.8mm. (see photo-47, 48) - Terminal of heating element fixing status check. (see photo-49, 50) 5. Label of power cord fixing status check. - Poor adhesion of label on power cord "L" wire, and it's easy to loose out. (see photo-51) 6. Earth label fixing status check. (see photo-52) 7. Connection wire and terminal fixing status check: - Found that connection wire can not fix in the terminal completely. (see photo-53)	OK OK NG OK NG OK NG	Need To improve. The distance between the heating element should $\geq 4\text{mm}$. Need to improve the adhesive workmanship of label. Need to improve the connecting workmanship.	✓ ✓ ✓	
G. Critical part list 1. Power plug: AS/NZS3112:2000 QINOPU D06 10A 250V~ Q02462 2. Power cord: VDE N18298 227IEC 53(RVV) 300/500V H05VV-F 4V-75 3G 1.0mm ² 3. Thermostat: KST 220 10A/250V~CQC TUV CE XINGOIU T250 4. Power switch: 16A 250VAC T100/55 EN/EC05 CQC VDE TUV RKI-15 SOKEN 5. Thermal link: AUPO BF157 TF157°C R3 VDE 6. Thermal cut-out: AUONE AUT-130 US 7. Inner wire: HAO CHENG VDE VR 1001775 H05SJ-K 1X1.0mm ²				
H. Others (attachment) 1. I/B : (no provide) 2. Guarantee card: (no provide) 3. BOM list: (no provide) 4. Power plug approval certificate: (no provide) 5. Power cord approval certificate: (no provide) 6. Exploded diagram: (no provide) 7. Product technical spec: (no provide) 8. Thermostat approval certificate: (no provide) 9. Thermal link approval certificate: (no provide) 10. Power switch approval certificate (no provide) 11. Thermal cut-out approval certificate (no provide) 12. Product circuit diagram: (no provide) 13. Heating element spec: (no provide) 14. Product approval certificate: (no provide)				
Evaluator: Henry Date: 2007 – 06 – (09&11)	Report By : Florence Date: 2007 – 06 – 12	Approved by: Simon Guo Date: 2007 – 06 – 13		

15. Product EMC approval certificate: (no provide)

I. Overall Comment

After carrying all necessary tests, the result is as follows:

Firstly, the product's electrical result can meet the requirement;

Secondly, product's cosmetic / functional / mechanical / workmanship, the result does not comply with requirement.

The main problems are:
1. Cosmetic problem:

- a. Without poly bag for base stand packing.
- b. Use the poly bag with pressed-inside opening which may easily open during transportation and make accessories in the bag dropping out.
- c. Without protective plastic for plug pin.
- d. Unit outer shell appearance check: 1) Coat on bottom of unit loose out. (1pc); 2) Coat on outer shell surface bulgy. (1pc); 3) Poor painting of inner bracket buckle position. (2pcs); 4) Poor painting on rear inner buckle position. (can be seen clearly from outer produce)

2. Functional problem:

- a. Rub test on rated label: Use alcohol to do rubbing test on surface of rated label with force of 300g for 15 times, letter on the label was erased.

3. Mechanical problem:

- a. Handle of unit assembly construction check: Gap about 3.7-4.0mm between handle and unit outer shell.
- b. Inner construction check: "L" and "N" wires of power cord are too near to the thermal link.
- c. Mica plate fixing on inner body construction check: Screw gets into the mica plate, and cause the mica plate loose out.
- d. Label fixing on inner of power cord check: Label on "N" wire of power cord missing.

4. Workmanship problem:

- a. Heating element fixing status: Distance between heating elements not even, distance between some of the heating elements is only 0.2-0.8mm.
- b. Label of power cord fixing status check: Poor adhesion of label on power cord "L" wire, and it's easy to loose out.
- c. Connection wire and terminal fixing status check: Found that connection wire can not fix in the terminal completely.

5. Items need customer to clarify:

- a. Only white box packing. Clarify with customer the individual packing method.
- b. Clarify with customer that color & printing requirement, logo, barcode No. and whether need the "WEEE" mark for individual packing box.
- c. Clarify with customer whether it require guarantee card.
- d. Clarify with customer whether need to add approval No. and C-Tick mark on rating label.
- e. Length: 165cm. Clarify with customer for the cord length specification.
- f. Clarify with customer for the logo requirement.
- g. Clarify with customer color of product.
- h. Product rating power input test. Please see data test record. Clarify with customer the test result.
- i. This product is shipped to NZ / AU. Need to clarify with customer the destination of this product.

6. Other problems:

- a. In order to assure the quality of the product, we hope that the factory can provide us the complete documents mentioned in the <product evaluation sample and document check list>.
- b. We expect that the factory can improve all the problems during the evaluation of the product.

Finally, for the above problems, we think the product **can not be accepted**.

Data Test Record of Convection Heater

No	Test items	sample #1	sample #2	Spec
1	Rating power input at 220V (W)	1335	1345	1300 (+5% / -10%)
2	Rating power input at 230V (W)	1450	1447	1400 (+5% / -10%)
3	Rating power input at 240V (W)	1574	1578	1500 (+5% / -10%)
4	Power Cord Length (cm)	164	165	>90

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VIS/ISO7.5/007/A

Reference Photos



Photo-1 White box packing for main unit



Photo-2 Poly bag for unit packing: 1pc



Photo-3 Base stand



Photo-4 Base stand



Photo-5 Use the poly bag with pressed-inside opening which may easily open during transportation and make accessories in the bag dropping out.



Photo-6 Mounting plate for rear unit: 2pcs



Photo-7 Mounting plate for bottom unit: 1pc



Photo-8 Concrete anchor: 3pcs



Photo-9 Wood screw: 3pcs



Photo-10 Phillip screw: 2pcs



Photo-11 Rating label on rear of unit.



Photo-12 With CAUTION text "DO NOT COVER" engraving on front of unit.



Photo-13 Power "0" and "I" mark on panel.



Photo-14 T.STAT "MIN" and "MAX" on panel.



Photo-15 Outer shell: front



Photo-16 Outer shell: rear



Photo-17 Outer shell: bottom(with base stand)



Photo-18 Outer shell: Right side



Photo-19 Outer shell: Left side



Photo-20 Outer shell: bottom



Photo-21 Handle -Right



Photo-22 Handle -Left



Photo-23 Thermostat switch



Photo-24 Coat on bottom of unit loose out.



Photo-25 Coat on outer shell surface bulgy.



Photo-26 Poor painting of inner bracket buckle position.-1



Photo-27 Poor painting of inner bracket buckle position.-2



Photo-28 Poor painting on rear inner buckle position. (can be seen clearly form outer produce)-1

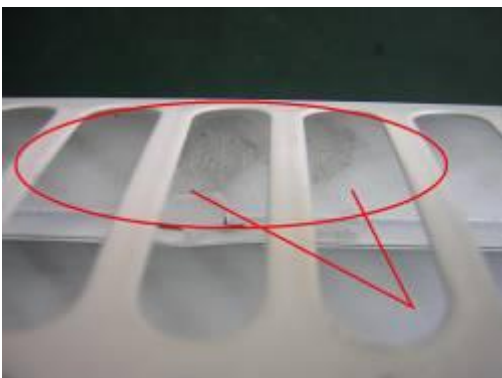


Photo-29 Poor painting on rear inner buckle position. (can be seen clearly form outer produce)-2



Photo-30 Use alcohol to do rubbing test on surface of rated label with force of 300g for 15 times, letter on the label was erased.



Photo-31 Stable degree test on base stand of unit. -1



Photo-32 Stable degree test on base stand of unit. -2



Photo-33 Use 6mm drill to make hole in the wall and drive in the concrete anchor, and then use the wood screw to fix the bracket and put the main unit on the bracket.



Photo-34 Handle of unit assembly construction check: Gap about 3.7- 4.0mm between handle and unit outer shell. -1



Photo-35 Handle of unit assembly construction check: Gap about 3.7- 4.0mm between handle and unit outer shell.-2



Photo-36 Handle of unit assembly construction check: Gap about 3.7- 4.0mm between handle and unit outer shell. -3



Photo-37 Handle of unit assembly construction check: Gap about 3.7- 4.0mm between handle and unit outer shell. -4



Photo-38 Screw gets into the mica plate, and cause the mica plate loose out.

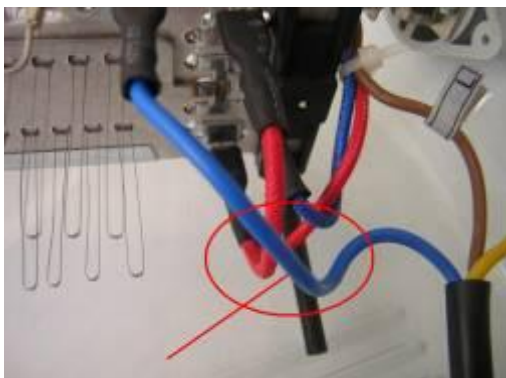


Photo-39 Label on "N" wire of power cord missing.



Photo-40 Power cord fixing on outer shell status check.



Photo-41 Power cord and cable gripper fixing status check.

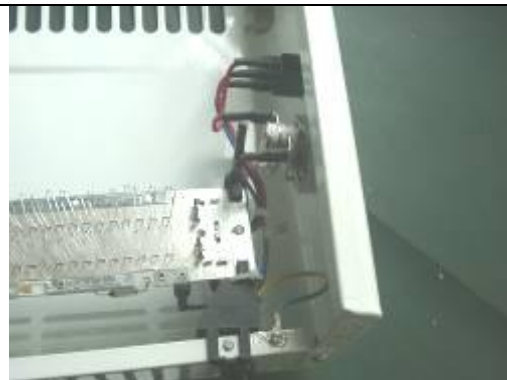


Photo-42 Inner wiring fixing on inner body status.



Photo-43 Connection terminal fixing on thermostat check.



Photo-44 Connection terminal fixing on power switch check

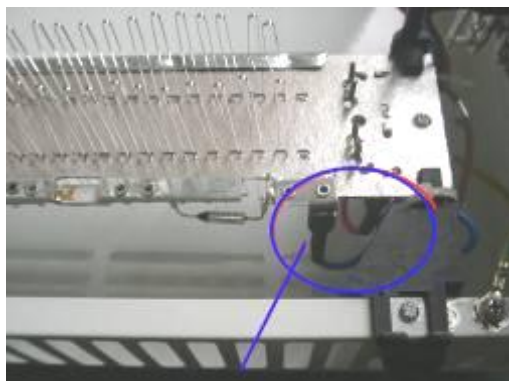


Photo-45 Connection terminal fixing on heating element check.



Photo-46 Connection terminal fixing on heating element check.

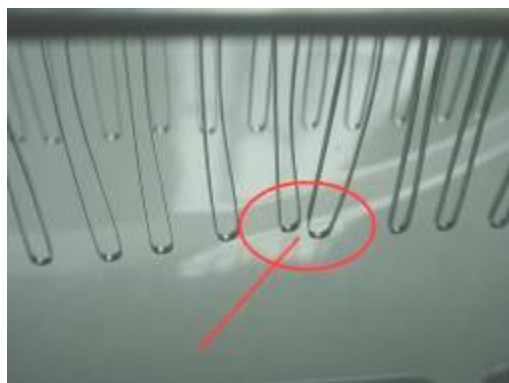


Photo-47 Heating element fixing status: Distance between heating elements not even, distance between some of the heating elements is only 0.8mm.



Photo-48 Heating element fixing status: Distance between heating elements not even, distance between some of the heating elements is only 0.2mm.

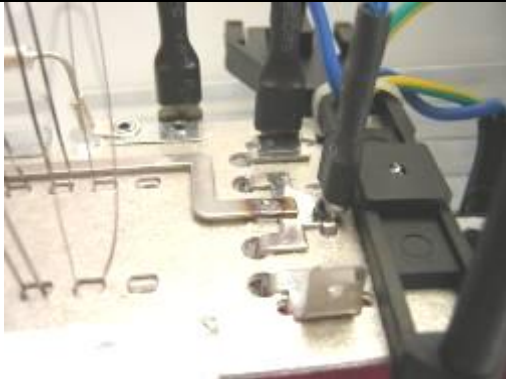


Photo-49 Terminal of heating element fixing status check. -1

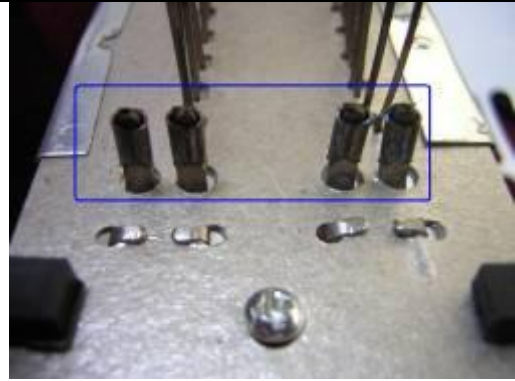


Photo-50 Terminal of heating element fixing status check. -2

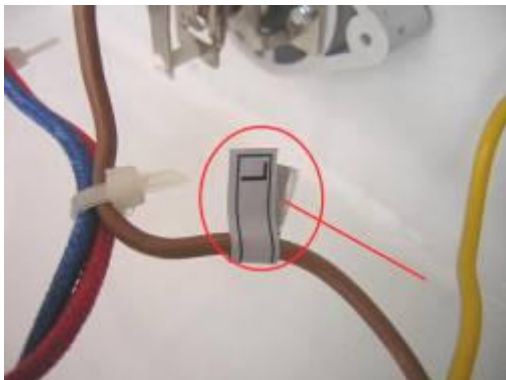


Photo-51 Poor adhesion of label on power cord "L" wire, and it's easy to loose out.



Photo-52 Earth label fixing status check.



Photo-53 Found that connection wire can not fix in the terminal completely.

End of Report