

# CUSTOMER NAME <Ningbo Deshen> TEST REPORT

## SCOPE OF WORK

ErP - electric portable local space heater -

Refer to annex model list.

## REPORT NUMBER

2503B2455SHA-001

## ISSUE DATE

7/Apr/2025

## PAGES

17 pages

## DOCUMENT CONTROL NUMBER

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## Local Space Heater ErP Test Report

<b>Report Number</b>	2503B2455SHA-001
<b>Test Laboratory:</b>	Intertek Testing Services (Shanghai FTZ) Co., Ltd.
<b>Address:</b>	Building 86, No.1198, Qinzhou North Road, Shanghai, China
<b>Date of issue:</b>	7/Apr/2025
<b>Applicant Name:</b>	Ningbo Deshen Electrical Appliances Co., Ltd.
<b>Address:</b>	Small Tuanpu Village, Guanhaiwei Town, Cixi City, Zhejiang Province, P. R. China
<b>Manufacturing Name:</b>	Same as applicant.
<b>Address:</b>	Same as applicant.
<b>Product:</b>	electric portable local space heater
<b>Brand Name:</b>	NA
<b>Description:</b>	The product covered by this report are Electric Local Space Heaters for indoor use only.
<b>Model(s) (if applicable):</b>	Refer to annex model list.
<b>Model Similarity:</b>	All of these models have same construction, heating element and circuit except for appearance.
<b>Rated voltage (V):</b>	Refer to annex model list.
<b>Rated input frequency (Hz):</b>	Refer to annex model list.
<b>Rated input power (kW):</b>	Refer to annex model list.
<b>Heat output (kW):</b>	Refer to annex model list.
<b>Date of receipt of sample(s):</b>	26/Mar/2025
<b>Date of test:</b>	7/Apr/2025
<b>Test standard(s) or criteria(s):</b>	COMMISSION REGULATION (EU) 2024/1103 of 18 April 2024 implementing Directive 2009/125/EC of the European Parliament and of the Council as regards ecodesign requirements for local space heaters and separate related controls and repealing Commission Regulation (EU) 2015/1188 2024/90295 Corrigendum to Commission Regulation (EU) 2024/1103 of 18 April 2024 implementing Directive 2009/125/EC of the European Parliament and of the Council as regards ecodesign requirements for local space heaters and separate related controls and repealing Commission Regulation (EU) 2015/1188 (EU) 2016/2282 EN 60675:1995+A1:1998+A2:2018+A11:2019 EN 50564:2011

Jaki. Pan

Jaki Pan  
Reviewer

The test report only allows to be revised within three years from its original issued date unless further standard or the requirement was noticed. When determining the test result, measurement uncertainty has been considered.

**Product Information**

Model number of Unit Under Tested		PTC-2023								
Product Type		Fixed								
With Thermostat		Yes								
Thermostat Type		Electronic								
With Daily or Weekly Timer		Yes								
Timer Type		Weekly								
Number of Heating Stages		2								
Type of Control		Touch Press and Remote control								
Oscillation	Type	NA								
	Style	NA								
Digital panel		Yes								
<b>Other automatic controls:</b> <table border="0" style="width: 100%;"> <tr> <td><input type="checkbox"/> Presence detection</td> <td><input type="checkbox"/> Adaptive start control</td> </tr> <tr> <td><input checked="" type="checkbox"/> Open window detection</td> <td><input checked="" type="checkbox"/> Working time limitation</td> </tr> <tr> <td><input type="checkbox"/> Distance control option</td> <td><input type="checkbox"/> Black bulb sensor</td> </tr> <tr> <td><input type="checkbox"/> Self-learning functionality</td> <td><input type="checkbox"/> Control accuracy</td> </tr> </table>			<input type="checkbox"/> Presence detection	<input type="checkbox"/> Adaptive start control	<input checked="" type="checkbox"/> Open window detection	<input checked="" type="checkbox"/> Working time limitation	<input type="checkbox"/> Distance control option	<input type="checkbox"/> Black bulb sensor	<input type="checkbox"/> Self-learning functionality	<input type="checkbox"/> Control accuracy
<input type="checkbox"/> Presence detection	<input type="checkbox"/> Adaptive start control									
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<input type="checkbox"/> Distance control option	<input type="checkbox"/> Black bulb sensor									
<input type="checkbox"/> Self-learning functionality	<input type="checkbox"/> Control accuracy									

**Product Information**

Model number of Unit Under Tested		PTC-2023 WIFI								
Product Type		Fixed								
With Thermostat		Yes								
Thermostat Type		Electronic								
With Daily or Weekly Timer		Yes								
Timer Type		Weekly								
Number of Heating Stages		2								
Type of Control		Touch Press and Remote control								
Oscillation	Type	NA								
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Digital panel		Yes								
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<input checked="" type="checkbox"/> Distance control option	<input type="checkbox"/> Black bulb sensor									
<input type="checkbox"/> Self-learning functionality	<input type="checkbox"/> Control accuracy									

**Ecodesign requirements of (EU) 2024/1103**

Item	Result - Remark	Verdict
<b>1. Specific ecodesign requirements for seasonal space heating energy efficiency</b>		
(d) seasonal space heating energy efficiency of electric portable local space heaters shall not be less than 44,7%;		N/A
(e) seasonal space heating energy efficiency of electric fixed local space heaters with a nominal heat output above 250 W, except towel rails, shall not be less than 47,5%;		P
(f) seasonal space heating energy efficiency of electric fixed local space heaters with a nominal heat output equal or below 250 W, except towel rails, shall not be less than 43,1%;		N/A
(g) seasonal space heating energy efficiency of electric storage local space heaters shall not be less than 47,3%;		N/A
(h) seasonal space heating energy efficiency of electric underfloor local space heaters shall not be less than 47,5%;		N/A
(i) seasonal space heating energy efficiency of electric visibly glowing radiant local space heaters with a nominal heat output above 1,2 kW, except electric visibly glowing radiant portable local space heaters, shall not be less than 46,8%;		N/A
(j) seasonal space heating energy efficiency of electric visibly glowing radiant local space heaters with a nominal heat output equal or below 1,2 kW, except electric visibly glowing radiant portable local space heaters, shall not be less than 40,5%;		N/A
(k) seasonal space heating energy efficiency of electric visibly glowing radiant portable local space heaters shall not be less than 39,5%;		N/A
(n) seasonal space heating energy efficiency of towel rails with a nominal heat output above 250 W shall not be less than 46,0%;		N/A
(o) seasonal space heating energy efficiency of towel rails with a nominal heat output above 60 W and equal or below 250 W shall not be less than 42,1%.		N/A
(2) Electric storage local space heaters shall be equipped with electronic heat charge control with room and/or outdoor temperature feedback and fan assisted heat output.		N/A
(3) Towel rails with a nominal heat output equal or below 60 W shall only be operable through a working time limitation with a maximum pre-set period of time no longer than 6 hours.		N/A

2. Requirements for low power		
Local space heaters have an off-mode and the power consumption in off-mode (Po) shall not exceed 0,50 W	0.00W	P
off-mode (Po) shall not exceed 0,30 W from 9 May 2027		P
Local space heaters have an standby mode and the power consumption in standby mode (Psm) shall not exceed 0,50 W		N/A
if the standby mode includes the display of information or status, the power consumption of that mode shall not exceed 1,00 W	0.26W for PTC-2023; 0.97W for PTC-2023 WIFI	P
The power consumption of networked standby mode (Pnsm) shall not exceed 2,00 W	0.97W for PTC-2023 WIFI	P
(Pnsm) shall not exceed 3,00 W if the communication between the heat generator and the control is wireless or through powerline		N/A
The power consumption of the idle mode (Pidle) shall not exceed 1,00 W as average over 1 hour, or	Fan keep working	N/A
(Pidle) shall not exceed 3,00 W if the idle mode depends on the input from a network connection to automatically provide heat to the room	Fan keep working	N/A

3. Requirements for product information		
(1) the instruction manuals for installers and end-users, and free access websites of manufacturers, their authorised representatives and importers shall contain the following elements:		
(a) for gaseous or liquid fuel local space heaters, the information set out in Table 1, with its technical parameters measured and calculated in accordance with Annex III and showing the significant figures indicated in the table; or		N/A
for local space heaters placed on the market without control in Table 2 of this Annex, with the technical parameters measured and calculated in accordance with Annex III		N/A
(b) for electric local space heaters, the information set out in Table 3, with its technical parameters measured and calculated in accordance with Annex III and showing the significant figures indicated in the table; or		P
in case of local space heaters placed on the market without control, in Table 4 of this Annex, with its technical parameters measured and calculated in accordance with Annex III		N/A
(c) for domestic local space heaters placed on the market without control, Table 7 as displayed in this Annex and without any modification;		N/A
(d) for commercial local space heaters, the information set out in Table 5 of this Annex, with its technical parameters measured and calculated in accordance with Annex III		N/A
(e) any specific precautions that shall be taken when the local space heater is assembled, installed or maintained;		P
(f) information relevant to disassembly, recycling and/or disposal at end-of-life;		P
(g) for local space heaters placed on the market without control, the information in Tables 2 and Table 4 shall be drawn up for at least one combination of local space heater and control functions that make the product compliant with this Regulation;		N/A
(h) for separate related controls, Table 7 as displayed in this Annex and without any modification, and the information in Table 6.		N/A
(2) The instruction manual for installers and users, free access websites of manufacturers, their authorised representatives and importers, and the product packaging shall incorporate the following product information		
(c) for electric portable local space heaters and electric visibly glowing radiant portable local space heaters: 'This product is only suitable for well insulated spaces or occasional use.'; (i) for the instruction manual for users this sentence shall be on the cover page of the manual; (ii) for free-access websites of manufacturers this sentence shall be displayed together with the other characteristics of the product; (iii) for the product packaging the sentence shall be placed in a prominent position on the packaging.		P
(4) The instructions manuals and the product packaging may contain additional information about the characteristics of the product that may be useful to installers and users.		N/A

Remark: test case does not apply to the test object : N/A  
test object does meet the requirement : P (Pass)  
test object does not meet the requirement : F (Fail)

**Information requirement for the electric local space heaters**

Contact details	refer to the name and address of the importer or authorized representative within the EEA				
Model identifier(s): PTC-2023					
Item	Symbol	Value	Unit	Item	Unit
<b>Heat output</b>				<b>Type of heat output/room temperature control (select one)</b>	
Nominal heat output	P <sub>nom</sub>	2.000	kW	single stage heat output and no room temperature control	No
Minimum heat output (indicative)	P <sub>min</sub>	0.750	kW	two or more manual stages, no room temperature control	No
Maximum continuous heat output	P <sub>max,c</sub>	2.000	kW	with mechanic thermostat room temperature control	No
<b>Power consumption</b>				with electronic room temperature control	No
In off mode	P <sub>o</sub>	0.00	W	electronic room temperature control plus day timer	No
In standby mode	P <sub>sm</sub>	0.26	W	electronic room temperature control plus week timer	Yes
In idle mode	P <sub>idle</sub>	N/A	W	<b>Other control options (multiple selections possible)</b>	
In network standby	P <sub>nsm</sub>	N/A	W	room temperature control, with presence detection	No
Standby mode with display information or status			Yes	room temperature control, with open window detection	Yes
Seasonal space heating energy efficiency in active mode	η <sub>S,on</sub>	92.0	%	distance control option	No
				adaptive start control	No
				working time limitation	Yes
				black bulb sensor	No
				self-learning functionality	No
				control accuracy	No



### Information requirement for the electric local space heaters

Contact details	refer to the name and address of the importer or authorized representative within the EEA				
Model identifier(s): PTC-2023 WIFI					
Item	Symbol	Value	Unit	Item	Unit
<b>Heat output</b>				<b>Type of heat output/room temperature control (select one)</b>	
Nominal heat output	P <sub>nom</sub>	2.000	kW	single stage heat output and no room temperature control	No
Minimum heat output (indicative)	P <sub>min</sub>	0.750	kW	two or more manual stages, no room temperature control	No
Maximum continuous heat output	P <sub>max,c</sub>	2.000	kW	with mechanic thermostat room temperature control	No
<b>Power consumption</b>				with electronic room temperature control	No
In off mode	P <sub>o</sub>	0.00	W	electronic room temperature control plus day timer	No
In standby mode	P <sub>sm</sub>	0.97	W	electronic room temperature control plus week timer	Yes
In idle mode	P <sub>idle</sub>	N/A	W	<b>Other control options (multiple selections possible)</b>	
In network standby	P <sub>nsm</sub>	0.97	W	room temperature control, with presence detection	No
Standby mode with display information or status			Yes	room temperature control, with open window detection	Yes
Seasonal space heating energy efficiency in active mode	η <sub>S,on</sub>	94.0	%	distance control option	Yes
				adaptive start control	No
				working time limitation	Yes
				black bulb sensor	No
				self-learning functionality	No
				control accuracy	No

**Test Data for PTC-2023**

Description	Value
For electric local space heaters- $\eta_{th,nom}$	100%
The electric to primary energy 'conversion coefficient-CC	1.9
correction factor accounting for a positive contribution to the seasonal space heating energy efficiency due to adjusted contributions of controls of indoor heating comfort, the values of which are mutually exclusive, cannot be added to each other-F(2)	0.150
correction factor accounting for a positive contribution to the seasonal space heating energy efficiency due to adjusted contributions of controls for indoor heating comfort, the values of which can be added to each other-F(3)	0.020
Seasonal space heating energy efficiency in active mode- $\eta_{s,on}$ $\eta_{s,on} = \eta_{th,nom} \cdot [0.75+F(2)+F(3)]$	92.0%
Seasonal space heating energy efficiency - $\eta_s$ , for electric local space heaters $\eta_s = \eta_{s,on}/CC$	48.4%
Verdict	Pass

**Test Data for PTC-2023 WIFI**

Description	Value
For electric local space heaters- $\eta_{th,nom}$	100%
The electric to primary energy 'conversion coefficient-CC	1.9
correction factor accounting for a positive contribution to the seasonal space heating energy efficiency due to adjusted contributions of controls of indoor heating comfort, the values of which are mutually exclusive, cannot be added to each other-F(2)	0.150
correction factor accounting for a positive contribution to the seasonal space heating energy efficiency due to adjusted contributions of controls for indoor heating comfort, the values of which can be added to each other-F(3)	0.040
Seasonal space heating energy efficiency in active mode- $\eta_{s,on}$ $\eta_{s,on} = \eta_{th,nom} \cdot [0.75+F(2)+F(3)]$	94.0%
Seasonal space heating energy efficiency - $\eta_s$ , for electric local space heaters $\eta_s = \eta_{s,on}/CC$	49.5%
Verdict	Pass

Photos for PTC-2023:

Front view



Back view



Photos for PTC-2023 WIFI:

**Front view**



**Back view**



Control panel view

PTC-2023



PTC-2023 WIFI



WIFI connect for PTC-2023 WIFI:

WIFI: Long press for 3 seconds and wait for



flashing to connect WIFI.




Scan the QR code and download the Tuya APP to connect the device to wifi

## Open window detection

 Window detection	Screen Status: The temperature control indicator flashes	1. After the temperature control mode or heating mode is started, the window opening function can be started (the fan file cannot start the window detection function); 2. Open window detection opening and closing; 3. After the function is turned on, detect the room temperature, detect a cooling of 5 degrees at any time within 30 minutes, turn off the heating, and alarm
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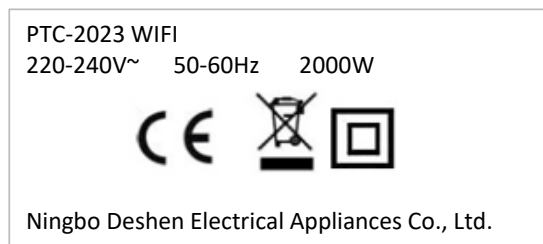
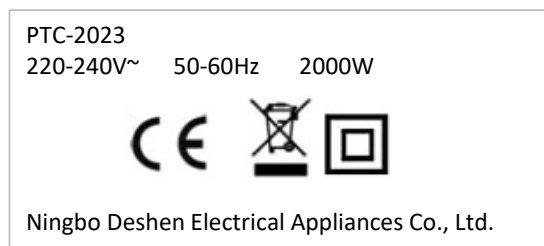
## Weekly Timer

 Weekly timing	Current time	first boot	After the temperature adjustment mode or heating mode is started, the weekly timing can be set (the fan file cannot start the weekly timing);  The first boot (start after power failure), you need to set the current time: Setup method: a. Week adjustment: display D1 at startup, press + or - continuously to adjust the week, a total of D1-D7 selection; Set the weekly timing key, and the week is selected; b. Hour adjustment: display 00 at this time, press + or - continuously to adjust the hour, a total of 00-23h selection; After setting, press the weekly timing key, and the hour is selected; c. Minute adjustment: 00 is displayed at this time, press + or - continuously, adjust the minute, a total of 00-59min selection; After setting, press the weekly timing key, and the minute is selected; Note: 1. After setting within each period, if there is no confirmation of OK within 10 seconds, the current time setting fails; 2. If you need to readjust the time, you must turn off the power switch and set it after restarting;			
		Current time is set	The screen shows P1			
	P1	fixed mode (See the mode time comparison table for details)	The first time the weekly timing screen displays P1 to enter the P1 mode, press the OK key at this time, and the weekly timing mode is selected; (If the OK button is not pressed for 10 seconds, the weekly timing setting fails);			
	P2		Press the weekly timing for the second time, the screen displays P2 to enter the P2 mode, press the OK button at this time, the weekly timing mode is selected; (if the OK button is not pressed for 10 seconds, the weekly timing setting fails);			
	P3		The third time the weekly timing screen displays P3 to enter the P3 mode, press the OK key at this time, and the weekly timing mode is selected; (If the OK button is not pressed for 10 seconds, the weekly timing setting fails);			
	P4		The fourth time the screen displays P4 by Weekly Timing Enter P4 mode, press the OK key at this time, and the weekly timing mode is selected; (If the OK button is not pressed for 10 seconds, the weekly timing setting fails);			
	P5		The fifth time the weekly timing screen displays P5 to enter the P5 mode, press the OK key at this time, and the weekly timing mode is selected; (If the OK button is not pressed for 10 seconds, the weekly timing setting fails);			
	P6	Free mode	The screen shows 1 and flashes when it flashes;  (Represents	<table><tr><td>Press OK</td><td>At this point, you enter Monday appointment mode a. At this time, the screen displays 00, press + or - continuously to adjust the hourly time; A total of 00-24h selection; After setting, press the OK key, and the appointment start time is set; b. At this time, the screen changes to 00, and also press + or - to adjust the hourly time; A total of 00-24h selection; After setting, press the OK</td></tr></table>	Press OK	At this point, you enter Monday appointment mode a. At this time, the screen displays 00, press + or - continuously to adjust the hourly time; A total of 00-24h selection; After setting, press the OK key, and the appointment start time is set; b. At this time, the screen changes to 00, and also press + or - to adjust the hourly time; A total of 00-24h selection; After setting, press the OK
Press OK	At this point, you enter Monday appointment mode a. At this time, the screen displays 00, press + or - continuously to adjust the hourly time; A total of 00-24h selection; After setting, press the OK key, and the appointment start time is set; b. At this time, the screen changes to 00, and also press + or - to adjust the hourly time; A total of 00-24h selection; After setting, press the OK					

		Monday)	button, at this time the appointment time period is set; c. Setting: The appointment start time is 00 and the appointment end time is 00, indicating that the appointment time period is closed, and the appointment mode on this day is closed;	
		The screen flickers for 5s	If it is not operated within 5s, the default time is closed, indicating that the Monday appointment mode is abandoned and jumped to 2 (Tuesday)	
		Other display 2-7	The setting method is the same	
		Note	1. Only one time period can be set to work every day; 2. Only the time can be adjusted on the hour, no minute selection; 3. Enter the daily setting, there are 2 levels of appointment start and appointment ending; 4. P6 automatic mode setting, 1-7 days must be set, or the default setting is turned off, only after the 7th day after the setting can be started. After 7 days of setting, the appointment is successful, and the weekly timing symbol is bright;	
		shortcut setting	1、1. When the screen flashes 1-7, press + or - to set the desired date, if not selected, the default is (open: 00, end: 00) to close, and finally set 7 (need to make an appointment time to enter the setting, do not need to press OK), the appointment mode starts; 2、2. After setting, there is a memory function (memory is maintained after canceling the weekly timing), and the memory function is canceled after the power is cut off;	
	Shut down	/	Seventh time by weekly timing, turn off the weekly timing mode;	
	Displays the status description	1. Switch the current ambient temperature on the screen after setting; The weekly timing light and the corresponding working mode light are on; 2. When the heating mode (low-grade or high-grade) or temperature control mode enters the appointment, the screen displays the ambient temperature, the weekly timing indicator flashes and the heating indicator flashes, if the temperature adjustment mode starts, the temperature adjustment indicator is always on, and the appointment state is entered at this time; 3. When making an appointment and working normally, it can be adjusted at any time: swing blade, low and high-grade heating, temperature regulation and window detection; 4. Normal operation, each work indicator is always on;		

Heating mode time comparison table:							
mode	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
P1	8:00-17:00	8:00-17:00	8:00-17:00	8:00-17:00	8:00-17:00	8:00-17:00	8:00-17:00
P2	18:00-7:00*	18:00-7:00*	18:00-7:00*	18:00-7:00*	18:00-7:00*	18:00-7:00*	18:00-7:00*
P3	8:00-17:00	8:00-17:00	8:00-17:00	8:00-17:00	8:00-17:00	OFF	OFF
P4	18:00-7:00*	18:00-7:00*	18:00-7:00*	18:00-7:00*	18:00-7:00*	OFF	OFF
P5	OFF	OFF	OFF	OFF	OFF	00:00-23:59	00:00-23:59
P6	Free setting mode	Free setting mode	Free setting mode	Free setting mode	Free setting mode	Free setting mode	Free setting mode
Note	a: In P2/P4 mode, the set end time exceeds the time of the day and continues to the next day; P6: Daily setting time range: 00-24h. When setting, the start time must be < the end time, otherwise the setting of the day will fail;						
 Cancel	Temperature control canceled	1. During the setting process, press the cancel button to cancel the setting mode; 2. After setting and working normally, press the temperature adjustment key first, and then press the cancel key to cancel the setting mode; 3. After cancellation, the default work is to work in the gear selected before temperature regulation (low gear enters temperature control mode, after cancellation, it is restored to low gear, high heat enters temperature regulation mode, and the restored is high grade) 4. Press the heating switch, the temperature adjustment mode is turned off;					
	Weekly scheduled cancellation	1. During the setting process, press the cancel button to cancel the setting mode 2. After setting and working normally, press the weekly timer key first, and then press the cancel button to cancel the setting mode; 3.1 The temperature adjustment mode enters the weekly timing, and after cancellation, the default is the high heat gear to work; 3.2 The heating mode enters the weekly timing, and after cancellation, the restored is: the low hot gear enters the weekly timing, and the restored is the low hot gear; The high hot gear enters the weekly timing, and after cancellation, the restored is the high hot gear					

Labels :





**Annex Model List:**

Model(s)	Rated voltage (V AC)	Rated input frequency (Hz)	Number of Heating Stages	Nominal heat output, P <sub>nom</sub> (kW)	Maximum continuous heat output, P <sub>max,c</sub> (kW)	Minimum heat output, P <sub>min</sub> (kW)	Product Type	Thermostat Type	Type of Control	With Daily or Weekly Timer (Timer Type)	Remark (Verdict)
PTC-2023, PTC-2023 GLASS, PTC-2024, PTC-2024 GLASS	220-240	50-60	2	2.000	2.000	0.750	Fixed	Electronic	Touch Press and Remote control	Yes(Weekly)	Refer to the equivalent model PTC-2023.
PTC-2023 WIFI, PTC-2023 WIFI GLASS, PTC-2024 WIFI, PTC-2024 WIFI GLASS	220-240	50-60	2	2.000	2.000	0.750	Fixed	Electronic	Touch Press and Remote control	Yes(Weekly)	Refer to the equivalent model PTC-2023 WIFI.

END