

<b>Number</b>	<b>P011</b>
<b>Subject</b>	Panasonic - Wine cellar and special rooms for low temperature applications
<b>Date</b>	30 November 2016

This document has been prepared by Logicool Air Conditioning & Heat Pumps Limited. It is based on existing Panasonic recommendations using units from the PACi range for special applications not only for standard heating and cooling ones.

The purpose of this product information bulletin is to explain in detail these special applications that need cooling to maintain rooms between 8°CWB and 24°CWB (10°CDB-30°CDB). To do that's in terms of enthalpy is needed to oversize indoor unit, and set up some parameters.

**Applications may include:**

- Wine storage 14°C
- Food prep 12°C
- Gymnasiums 16°C
- Clean room 16°C

**Note: Due to these special applications of the system the following aspects should be taken in account:**

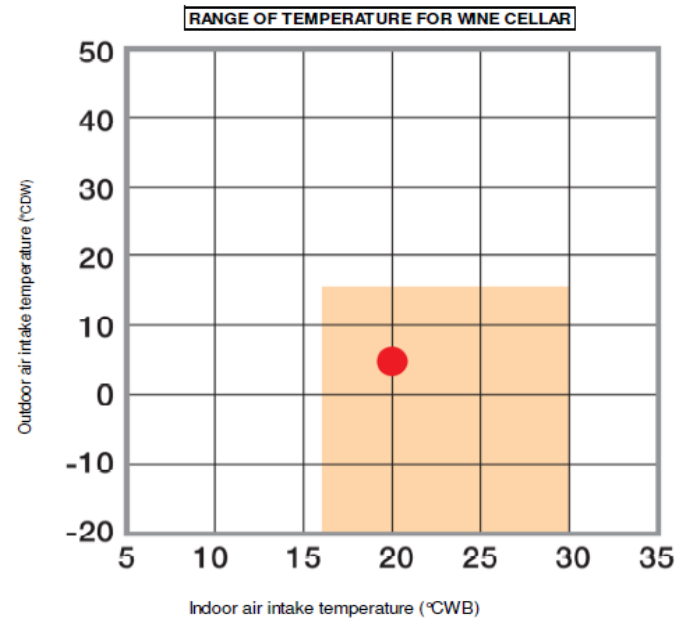
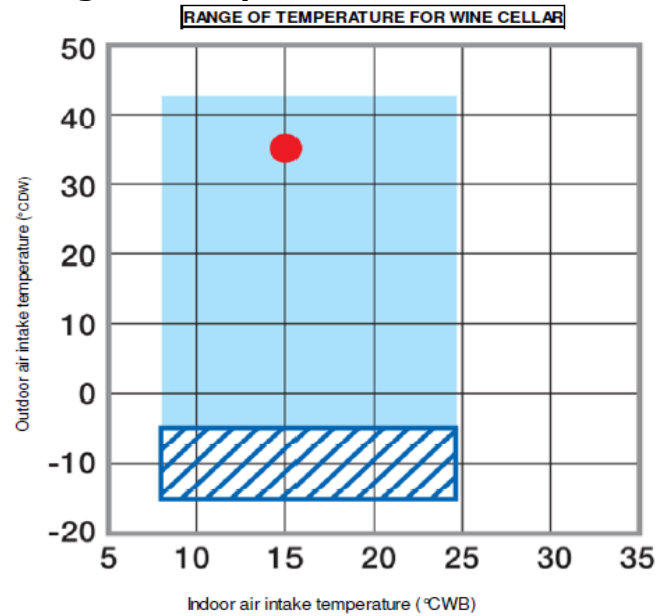
- Is important to think about some solution to probably condensation in louver when selected wall is mounted, ceiling or 4 ways cassette indoor unit, and in grills when duct type indoor unit are used. In those cases Panasonic cannot be responsible of any damage as a result of condensation, and installer has to provide some special insulation in those parts and also for base pan.
- Due to higher running hours to maintain cooling temperature, maintenance and filter cleanings processes have to be more often and careful.
- PACi system cannot control relative humidity, but can manage an ON/OFF external humidifier if is needed by using additional setting in indoor unit, as usual in PACi or ECOi.
- Those special applications are not tested under ErP regulation, so we do not have "official" capacity and consumption tables and energy label. Please explain clearly to your customer.



# Technical Bulletin

System Information		16°CDB, 13°CWB 50% RH / 35°C		14°CDB, 13°CWB 55% RH / 35°C		14°CDB, 13°CWB 60% RH / 35°C	
Outdoor Unit	Indoor Unit	Total Cooling Capacity kW (Nom) Min – Max	Sensible Cooling Capacity KW (Nom)	Total Cooling Capacity kW (Nom) Min – Max	Sensible Cooling Capacity KW (Nom)	Total Cooling Capacity kW (Nom) Min – Max	Sensible Cooling Capacity KW (Nom)
U-50PE1E5	S-71PK1E5A	4.9 (1.7 – 5.6)	3.75	4.9 (1.7 – 5.6)	3.55	4.9 (1.7 – 5.6)	3.42
U-71PE1E5A/8A	S-100PK1E5A	6.9 (1.9 - 8.0)	5.43	6.9 (1.9 - 8.0)	5.06	6.9 (1.9 - 8.0)	4.85
U-50PE1E5	U-71PF1E5A	4.9 (1.7 – 5.6)	3.75	4.9 (1.7 – 5.6)	3.52	4.9 (1.7 – 5.6)	3.32
U-71PE1E5A/8A	S-125PF1E5A	6.9 (1.9 - 8.0)	5.30	6.9 (1.9 - 8.0)	4.95	6.9 (1.9 - 8.0)	4.66
U-100PE1E5A/8A	S-140PF1E5A	9.3 (2.5 – 10.6)	6.23	9.3 (2.5 – 10.6)	6.03	9.3 (2.5 – 10.6)	5.16
U-125PE1E5A/8A	S-140PF1E5A	11.6 (3.0 – 12.5)	6.40	11.6 (3.0 – 12.5)	6.08	11.6 (3.0 – 12.5)	5.78
U-50PE1E5	S-71PT2E5A	4.9 (1.7 – 5.6)	3.48	4.9 (1.7 – 5.6)	3.21	4.9 (1.7 – 5.6)	2.97
U-71PE1E5A/8A	S-125PT2E5A	6.9 (1.9 – 8.0)	6.09	6.9 (1.9 – 8.0)	5.94	6.9 (1.9 – 8.0)	5.85
U-100PE1E5A/8A	S-140PT2E5A	9.3 (2.5 – 10.6)	6.28	9.3 (2.5 – 10.6)	6.14	9.3 (2.5 – 10.6)	5.93
U-125PE1E5A/8A	S-140PT2E5A	11.6 (3.0 – 12.5)	6.84	11.6 (3.0 – 12.5)	6.54	11.6 (3.0 – 12.5)	6.02



## Range of Temperature:



-  Only allowed if it has been installed wind protection and snow protection.
-  Point where is stablished cooling and heating capacity for this purpose.

Range of Temperature for Wine Cellar		
Cooling Capacity	Indoor	8 - 24°CWB
	Outdoor	-5 (-15*)—43°CDB
Heating Capacity	Indoor	16—30°CDB
	Outdoor	-20—15°CWB

**\* Only when has been installed wind protection and snow protection is allowed.**

## Compatibility Table:

Application	Single Split Combination						Twin Split Combination		
<b>Cooling Capacity</b>	4.9kW	6.9kW	9.3kW	11.6kW	13.6kW	18.5kW	13.6kW	18.5kW	23.2kW
<b>Heating Capacity</b>	5.6kW	8.0kW	11.2kW	14.0kW	15.0kW	22.4kW	13.6kW	22.4kW	28.0kW
<b>PACi Outdoor Model</b>	U-50PE1E5	U-71PE1E5A U-71PE1E8A	U-100PE1E5A U-100PE1E8A	U-125PE1E5A U-125PE1E8A	U-140PE1E5A U-140PE1E8A	U-200PE1E8	U-140PE1E5A U-140PE1E8A	U-200PE1E8	U-250PE1E8
	PACi Indoor Model						PACi Indoor Model		
<b>Wall Mount</b>	S-71PK1E5A S-100PK1E5A						S-100PK1E5A + S-100PK1E5A		
<b>Cassette</b>	S-71PU1E5A S-125PU1E5A S-140PU1E5A S-140PU1E5A						S-100PU1E5A + S-125PU1E5A + S-140PU1E5A + S-100PU1E5A S-125PU1E5A S-140PU1E5A		
<b>Ducted</b>	S-71PF1E5A S-125PF1E5A S-140PF1E5A S-140PF1E5A						S-100PF1E5A + S-125PF1E5A + S-140PF1E5A + S-100PF1E5A S-125PF1E5A S-140PF1E5A		
<b>Under Ceiling</b>	S-71PT2E5A S-125PT2E5A S-140PT2E5A S-140PT2E5A						S-100PT2E5A + S-125PT2E5A + S-140PT2E5A + S-100PT2E5A S-125PT2E5A S-140PT2E5A		
<b>Large Static Ducted</b>	S-200PE2E5A S-250PE2E5A								

## Settings are mandatory:

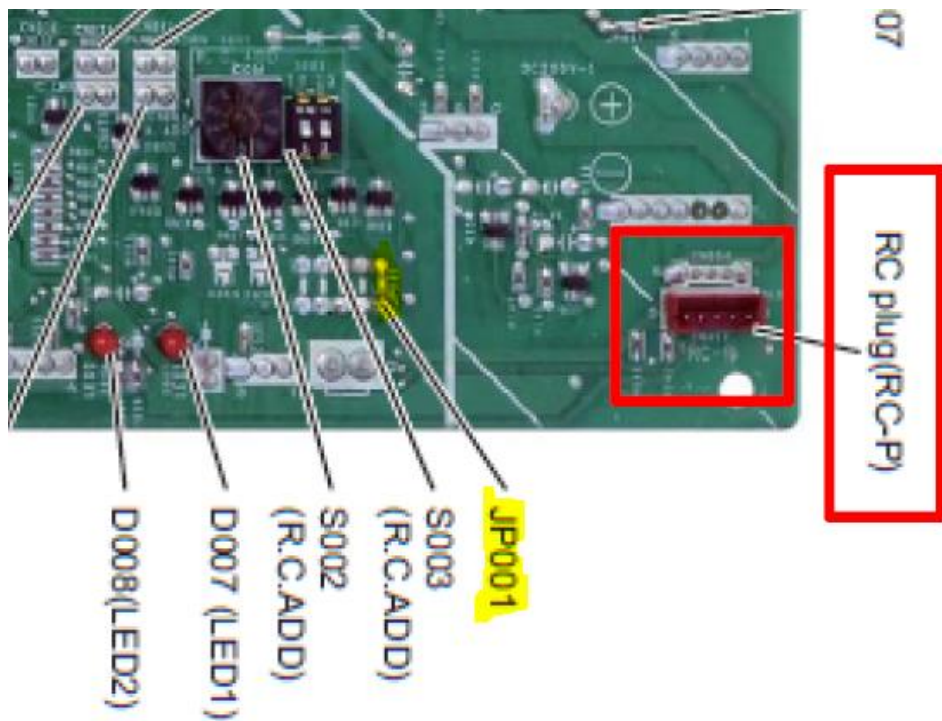
We must remember that these combinations are NOT STANDARD and it is mandatory to do some set up to 'turn' the system in to a "Special Wine Cellar" application. For all those settings one CZ-RTC4 is required to set up.

### Step 1

#### Cutting jumper JP001 in Outdoor Unit Control PCB:

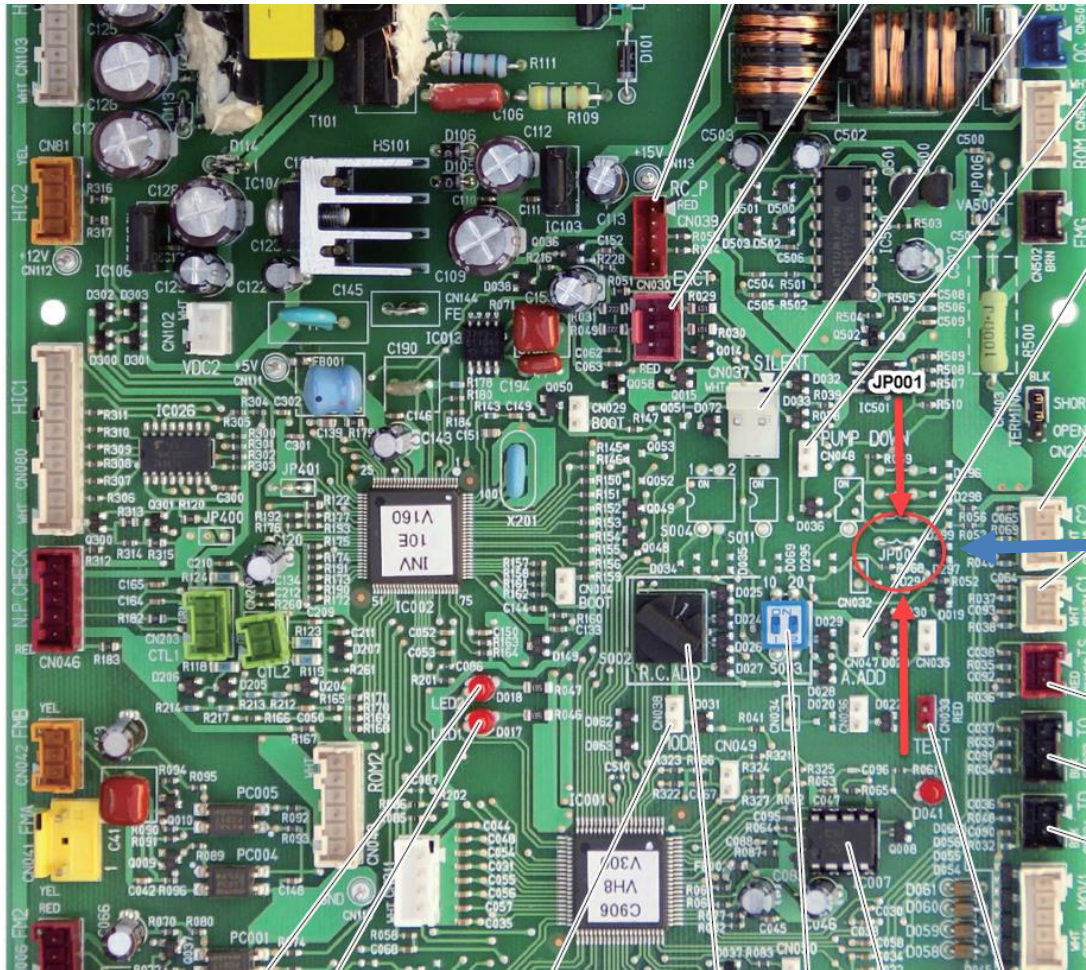
In all outdoor unit PCB close to S002 and S003 there is a wire jumper called JP001, this can be cut by using some snips.

#### U50 – U140 PCB





## U200 – U250 PCB



JP001. Check location in comparison to Rotary Switch and MOV plugs

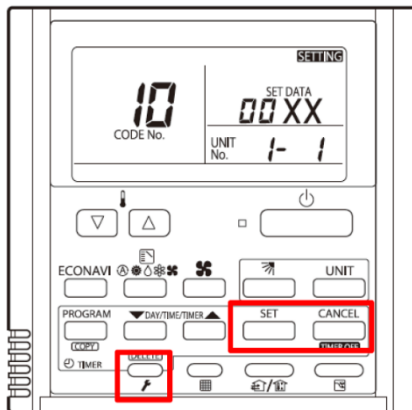
**Now connect the CZ-RTC4 Controller to the indoor unit as per a normal installation.**

**Step 2:**

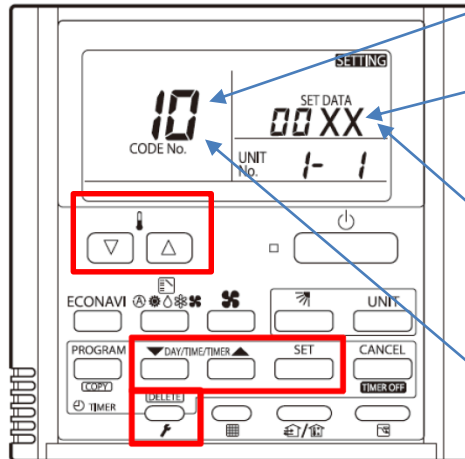
**Second change is related to Indoor Unit:**

Wired remote controller temperature setting range must be updated. This setting is located in "detailed setting"

Hold the TOOL, SET and CANCEL buttons simultaneously for 4 seconds or longer.



- By pressing temperature buttons select menu **1F** to limit maximum upper temperature in cooling mode. Pressing UP/DOWN timer buttons change from 30°C, at shipment to 24°C. Fix it by using SET button.



- By pressing temperature buttons select menu **20** to limit minimum lower temperature in cooling mode. Pressing UP/DOWN timer buttons change from 18°C, at shipment to 10°C. Fix it by using button and return to normal remote controller display by pressing TOOL button.

If system it only will be used for cooling, it's also recommended to change menu 0F in simple setting.

Item code	Item	Setting data	
		No.	Description
0F	Cool-only	0000	Normal
		0001	Cool only (Set "1" for item code OD.)