



PROJECT TITLE                    **RETROSPECTIVE PLANNING APPROVAL FOR  
KITCHEN EXTRACTION SYSTEM, AIR  
CONDITIONING CONDENSER UNIT AND  
CHILLER CONDENSERS,  
604 BACUP ROAD, WATERFOOT,  
ROSSENDALE, BB4 7EU**

PROJECT NUMBER                **22031**

REPORT DATE                    **2022-03-09**

REVISION                         **-**

REPORT TITLE                    **PLANNING STATEMENT**

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- 1.0 Introduction
- 2.0 Extraction system design
  - 2.1 Primary Cooking
  - 2.2 Design of the extraction system
  - 2.3 Fan
  - 2.4 Extraction flue
  - 2.5 Filters
  - 2.6 Flue
- 3.0 Air Conditioning
- 4.0 Freezer Refrigeration Units

## **APPENDIX**

- A** Site photographs
- B** Extraction system
- C** Air conditioning
- D** Freezer and chiller room specifications

## **1.0 INTRODUCTION**

- 1.1 This report has been prepared by ACP Architects on behalf of Choice Indian Street Food to support application for a retrospective planning approval for a kitchen extraction system.
- 1.2 The application also includes retrospective approval for a condenser for air conditioning for the restaurant plus two condenser units for the walk in cold freezer and fridge unit.
- 1.3 A separate planning application is to be made for signage to the building.
- 1.4 The building was previously in use as a fish and chip restaurant.
- 1.5 The building is located at the end of a three storey terrace. The units comprise shops at ground floor with storage/living accommodation over. Located on the side of the building is an open car park owned by Rossendale Borough Council.
- 1.6 The building is clad in stone with the exception of the side which is cement rendered.
- 1.7 The building is not listed and not located in a conservation area.

## **2.0 EXTRACTION SYSTEM DESIGN**

### **2.1 Primary Cooking**

The primary cooking within the property will be based on Indian food.

These types' foods and the way they are cooked are usually a low smoke creating food but in order to eliminate as much smoke and odour from the property the cooking appliances have a cooker hood over them which extracts to the open air.

### **2.2 Design of the extraction flue system**

The proposed extraction system has been designed by SS Commercial Kitchen Canopies.



Installed extraction system

The system has been designed in a manner which will firstly create the maximum potential effectiveness for air flow from the inside of the building to be pushed outside. The equipment and design used for the extraction system will enable the smoke fumes from inside the shop to be extracted so that there are reduced fumes within the premises and also pushed high enough outwards into the atmosphere so that it will not create any offence or harm to neighbours or passing public. The extraction is to be taken to discharge towards the rear of the premises through the gable side wall.

The stainless steel extractor canopy is manufactured from food grade stainless steel and is manufactured to be heavy duty to withstand all the pressures of the shop including daily cleaning, regular maintenance, easy removal of baffle filters etc.

The flue pipe itself will be fitted using strong brackets in order to withstand wind pressure outside, and also fitted using anti-vibration mounts and matting which will help to reduce noise caused by movement of the duct through wind and use during extraction. By implementing this system we feel that it will benefit the surrounding area and the public even more than it does at the moment as it will reduce smells and odours from the trading premises at present and will also allow the business to trade there without creating any unsightly visions as the ducting pipes which are manufactured from galvanised steel.

### 2.3 Filters

To further aid the reduction of removal of odours and grease, it is proposed to use Longar Type 8 activated carbon baffle filters located within the extraction hoods immediately over the areas of cooking ( refer to Appendix B).

## 2.4 **Extraction flue**

The proposed extraction flue pipe will be made from a 450mm diameter galvanised mild steel sheet of a folded lock-formed and flange construction.

The flue will terminate with a jet cowl. The china mans hat type cowl shown in the photographs is to be removed and replaced with a jet cowl to improve performance.

The flue is to be designed and positioned to not cause harm to the amenity of neighbours from noise and odour

For specification details refer to appendix B.

## 2.5 **Fan**

The external flue is fitted with a Contra- Foil contra-rotating cased axial flow fans (aluminium impellers). For specification details refer to appendix B.

## 2.6 **Silencer**

The flue is to be fitted with attenuators to reduce noise impact.

For specification details refer to appendix B.

## 3.0 **AIR CONDITIONING**

The restaurant is fitted with a R32 Panasonic air conditioning unit. This requires a condenser unit to be located externally. The proposed location is to wall mount the condenser unit on the side gable wall. Noise output is considered to be super quiet at 19dB(A), equivalent to night-time in the countryside.

For specification details refer to appendix C.

## 4.0 **FREEZER REFRIGERATION UNITS**

A walk in freezer and cold store has been built in the cellar for food storage.

The units both use a Zanotti condenser unit which needs to be remotely located in an external location. The proposed location is to wall mount the units on the side gable wall.

For specification details refer to appendix D.

SITE PHOTOGRAPHS

APPENDIX

A



Plan - Photographs



*P1 - front*



*P2 - side*



*P3 - rear*



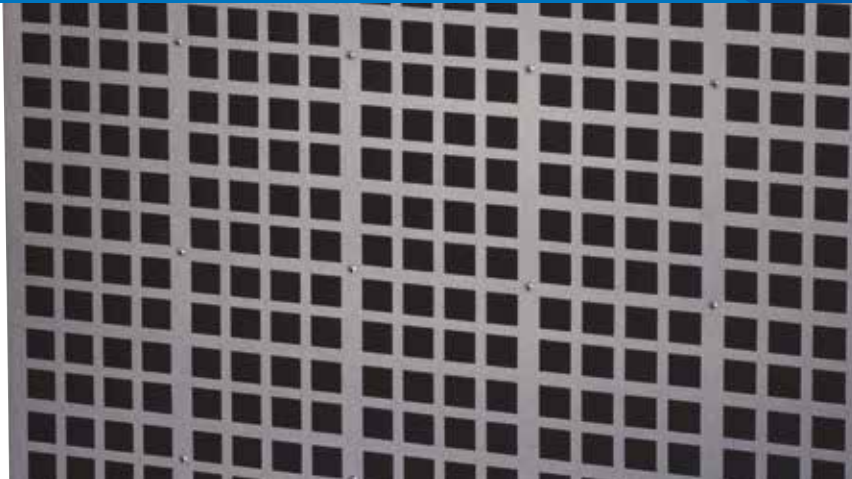
EXTRACTION SYSTEM

APPENDIX

**B**

# LONGAR® Type 8

## Activated Carbon Filters



### LONGAR® TYPE 8 FEATURES:

- High grade carbon / High carbon content / Low pressure loss
- Robust modular construction
- Carbon Unit or panel format / Standard and Custom sizes available
- CNC manufactured / Precision products every time

### APPLICATIONS

- Reduction of Cooking Odours
- Removal of Kerosene Exhaust Fumes
- General Odour Reduction
- Neutralisation of Ammonia and its Derivatives
- Removal of Formaldehyde
- Removal of Airborne Pollutants and Contaminants
- Removal of Acid Gases (please enquire as to specific contaminant)

### LONGAR® TYPE 8 ACTIVATED CARBON FILTERS

Activated carbon has for many years been used to remove airborne noxious fumes and gases. Its origins date back to the First World War, when gas masks were first filled with Activated carbon to remove chlorine gas. Today Longar produces a wide range of carbon filters to deal with a variety of air pollution scenarios.

There are many situations where carbon filtration is used to eliminate toxic or offensive odours, some of these are sewage works, hospitals, slaughterhouses, restaurant kitchens, airports, toilets, wash rooms, laboratories, and office blocks.

### PRE FILTRATION

Carbon filters are designed to remove fumes and odours, they are not suitable for removing dust and fine particles. If left unprotected, the life of the carbon product is severely reduced. To protect the filters use the correct pre filtration. If you are unsure please enquire for further information.

### LONGAR® TYPE 8 ACTIVATED CARBON PANELS

The Activated carbon panel are sealed into a galvanised steel frame; a scrim is then added to protect the carbon surface from dust contamination. Sealing the carbon panel stops any air by-pass; our panels are manufactured using CNC technology to ensure precision manufacture with exact tolerances.

Our panels are the strongest on the market place with a wide range of standard sizes available, custom sizes are also available on request.

### LONGAR® TYPE 8 ACTIVATED CARBON UNITS (ACU)

For a modular approach to fume removal the ACU is the ideal solution. The ACU unit is manufactured from a number of carbon panels held in place by a CNC made corrosion proof metal casing. The carbon panels inside the units are 25mm thick, sealed into the frames using polymer which eliminates the possibility of any air by-pass around the carbon.

### LONGAR® TYPE 8 CYLINDRICAL FILTER

These are constructed from perforated galvanised steel then formed into cylindrical cartridges containing high grade or impregnated carbon. The cylinders have a bayonette fit into the filter mounting plate.

All cylinders have a unique feature of having the option to replace any spent carbon and then refill with new replenished carbon.

For technical specifications, part numbers and ordering information, please see overleaf.

# LONGAR® Type 8

## Activated Carbon Filters

### FITTING INSTRUCTIONS

- Fit products in accordance with installation contractor's specifications. Observe direction of airflow.

### HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

### MAINTENANCE

- Carbon filters cannot be cleaned upon reaching the end of their service life. They must be replaced.
- All maintenance and replacement schedules will be set by the original equipment installer. Please refer to this for more information.
- When handling any components suitable PPE should be used – gloves, eye protection and access equipment.
- Carbon filters may be recycled.

### PACKAGING

All units are packaged in double wall boxes, stapled closed for protection whilst in transit against contamination.

### TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)					
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Airflow M <sup>3</sup> /SEC @0.12 Contact	Pressure Loss - Pascals
CARBONCUBE242424	597 x 597 x 597mm	609 x 609 x 609mm	60.00kgs	1.00	97
	23.50 x 23.50 x 23.50"	24 x 24 x 24"	132.00lbs		
CARBONCUBE242418	597 x 597 x 450mm	609 x 609 x 457mm	44.00kgs	0.75	97
	23.50 x 23.50 x 17.72"	24 x 24 x 18"	96.80lbs		
CARBONCUBE241824	597 x 450 x 597mm	609 x 457 x 609mm	46kgs	0.75	97
	23.50 x 17.72 x 23.50"	24 x 18 x 24"	101.20lbs		
CARBONCUBE182424	450 x 597 x 597mm	457 x 609 x 609mm	46kgs	0.75	97
	17.72 x 23.50 x 23.50"	18 x 24 x 24"	101.20lbs		
CARBONCUBE242416	597 x 597 x 395mm	609 x 609 x 406mm	40.00kgs	0.67	97
	23.50 x 23.50 x 15.55"	24 x 24 x 16"	88.00lbs		
CARBONCUBE242412	597 x 597 x 292mm	609 x 609 x 305mm	33.00kgs	0.50	97
	23.50 x 23.50 x 11.50"	24 x 24 x 12"	72.60lbs		
CARBONCUBE241224	597 x 297 x 597mm	609 x 304 x 609mm	32.00kgs	0.50	97
	23.50 x 11.69 x 23.50"	24 x 12 x 24"	70.40lbs		
CARBONCUBE24824	597 x 197 x 597mm	609 x 203 x 609mm	19.00kgs	0.33	97
	23.50 x 7.76 x 23.50"	24 x 8 x 24"	41.80lbs		
CARBONCUBE202018	495 x 495 x 445mm	508 x 508 x 457mm	36kgs	0.52	97
	19.49 x 19.49 x 17.52"	20 x 20 x 18"	79.20lbs		
CARBONCUBE181818	450 x 450 x 450mm	457 x 457 x 457mm	28.00kgs	0.42	97
	17.72 x 17.72 x 17.72"	18 x 18 x 18"	61.60lbs		
FINAL RECOMMENDED PRESSURE DROP: 450 PASCALS					

Pressure drop and airflow information available on request.



## LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

Longar Industries Limited, Unit 25, Glenmore Business Park, Colebrook Way Weyhill Road, Andover, Hampshire SP10 3GZ United Kingdom  
 T +44 (0)1264 332 993 F +44 (0)1264 332 994 E info@longarind.com W www.longarind.com

As part of our program for continuous improvement, Longar Ltd reserves the right to change specifications without notice. 15-01-2016.

# Shush (UK) Ltd

## Quality Sheetmetal & Silencer Manufacturers

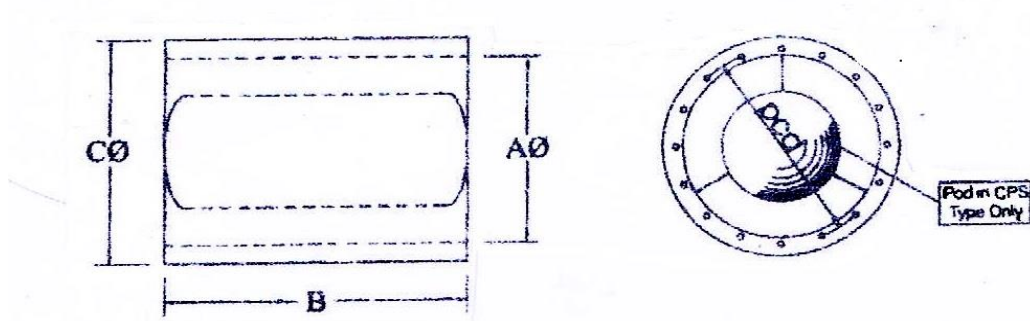
### Specification Sheet – Circular Silencers

Model: CS (without POD)

Model: CPS (with POD)

#### **Standard Specification for cylindrical type attenuators:**

The fabrication of attenuators shall consist of galvanised outer casing, perforated inner lining, glass tissue and sound absorbing material 75mm thick as standard, this can be less or more upon request. End faces are fitted with spigots as standard or can be drilled and tapped to match the flange of the associated fan (fan drilling details will be required).



A = inside diameter

B = length

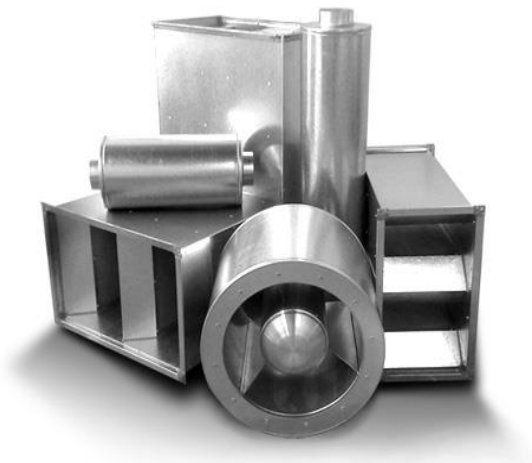
C = standard outside diameter

(I/D + 150) 100 – 800Ø

(I/D + 200) 900Ø and above

#### **Melinex lining**

Available on request, this is a membrane which goes between the perforated sheet and the glass tissue usually required when silencers are being installed in areas that have potential greasy/moist extract systems.



# Roof ejectors

## HAN/HAF

[Download Wentyle](#)  
[Download AlnorCAM](#)  
[Buy via B2B](#)



### Description

HAN/HAF ejectors can be used in both industrial and residential buildings.

Air is ejected vertically upwards so as to prevent air pollution near and on the roof. The ejector is efficient enough to place fresh air intakes close nearby. Typically, these ejectors are made of galvanised sheet metal, but upon request they can also be made of acid-proof steel, aluminium or steel coated with plastics in various colours. The ejectors are 1/2 covered with mesh and furnished with an internal snow or rainwater chute flange. Typically, HAF ejectors are manufactured with an FLS flange.

Typically, HAN ejectors are manufactured with a male or female flange.

#### Example identification

Product code: **HAN** - **aaaa**

type \_\_\_\_\_  
 fitted directly onto the fittings, in the duct,  
 on the duct

Ød<sub>1</sub> \_\_\_\_\_

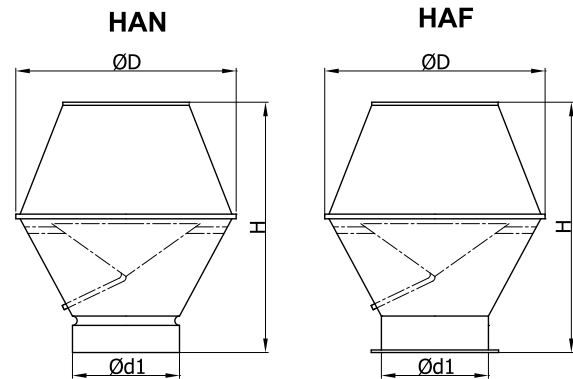
#### Example identification

Product code: **HAF** - **aaaa**

type \_\_\_\_\_  
 installed via a flange

Ød<sub>1</sub> \_\_\_\_\_

### Dimensions



H = installation height

#### HAN/HAF

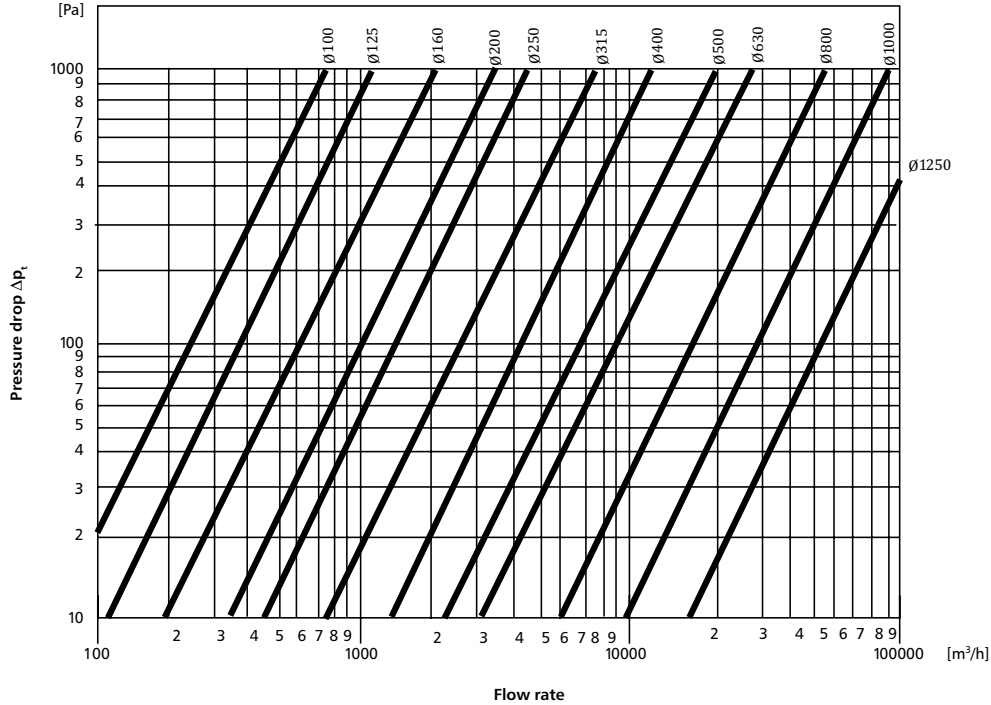
Ød <sub>1</sub> [mm]	ØD [mm]	H [mm]	weight HAF [kg]	weight HAN [kg]
100	180	220	1,1	0,7
125	225	240	1,4	0,9
140	245	280	1,5	1,0
150	265	315	1,8	1,3
160	280	340	1,9	1,3
180	310	375	2,2	1,6
200	345	420	2,8	2,1
224	385	475	3,1	2,3
250	430	505	3,7	2,9
280	480	585	5,3	4,2
300	515	600	6,2	5,0
315	550	620	7,7	6,4
355	615	705	9,3	7,9
400	685	905	15,7	14,1
450	775	970	18,3	16,5
500	855	1055	21,3	19,3
560	955	1170	25,9	23,4
600	1015	1255	32,0	29,3
630	1075	1300	33,5	30,7
710	1215	1490	46,3	43,1
800	1360	1630	59,4	55,8

# Roof ejectors HAN/HAF

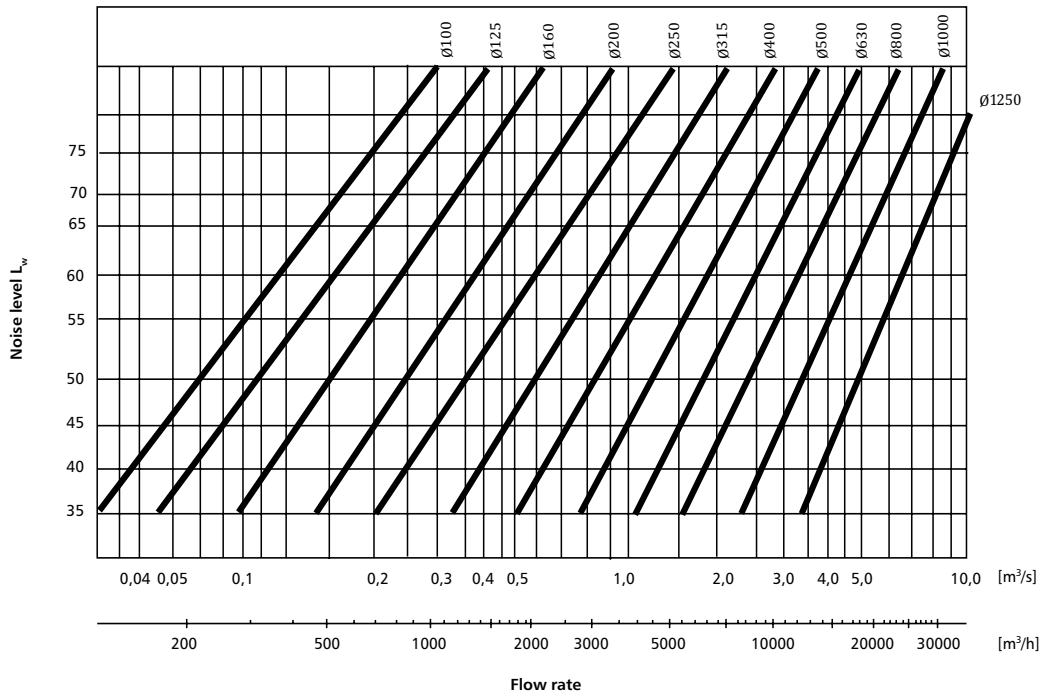
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[Download AlnorCAM](#)  
[Buy via B2B](#)

## Technical Data

### Pressure drop



### Noise data





# CONTRA-FOIL™ contra-rotating cased axial flow fans (aluminium impellers)

TCBBX2/4-450 (230V50HZ)

V3



Range of cylindrical cased axial fans fitted with aluminium impellers and manufactured from high grade rolled galvanised steel and protected against corrosion by cataforesis primer and black polyester paint finish. Fitted with 2 contra rotating complementary impellers manufactured from die-cast aluminium. All models are supplied with pre-wired wiring junction box located on the outside of the fan casing for easy wiring access. Available with single or three phase 4 poles motors.

## Motors

All the motors are IP65, Class F insulation (1), equipped with thermal protection.

Single phase motors are variable voltage (Excepted TCBBX2/4-630).

Three phase motors suitable for inverter control.

Electrical supplies:

Single phase 230V-50Hz (Capacitor located inside the wiring terminal box)

Three phase 230/400V-50Hz.

(1) Working temperatures from -40°C up to 70°C.

## + Attributes



### Contra-rotating: High pressure

Contra-rotating system with two complementary impellers allowing the duplication of the pressure with the same air volume



### Corrosion resistance

Rolled steel casings and motor support protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



### Terminal box

Wiring terminal box with cable gland PG-11.



### Impeller dynamically balanced

Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.

## + Acoustic characteristics

Hz	63	125	250	500	1k	2k	4k	8k	Overall
Inlet (LwA)	46	73	85	82	85	79	72	64	90
Inlet LpA @ 1.5m	31	58	70	67	70	64	57	49	75
Outlet (LwA)	63	75	86	85	87	82	74	67	92
Outlet LpA @ 1.5m	48	60	71	70	72	67	59	52	77

”

## + Technical characteristics

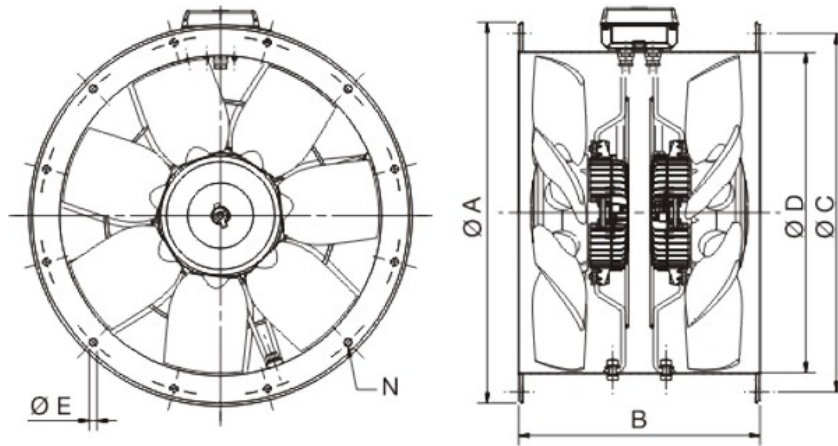
CONSTRUCTION

MOTOR CHARACTERISTICS

”



## + Dimensions



A	B	C	D	E	N
537	375	500	450	12	8

## + Curve - Example of selection

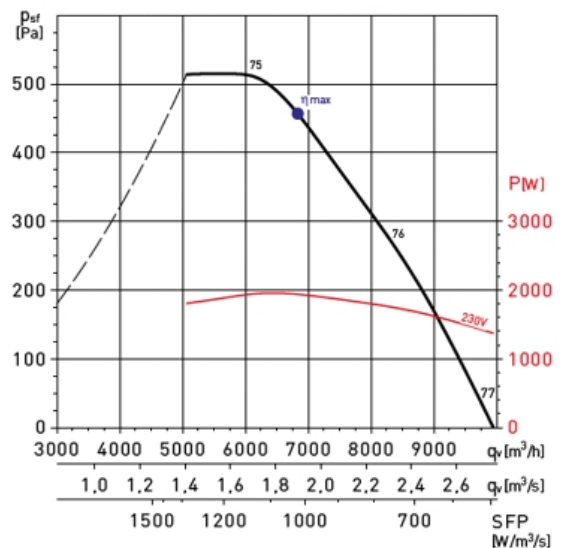
### PERFORMANCE CURVES TCBBx2 / TCBTx2

- $q_v$ : Air volume in  $m^3/h$  and  $m^3/s$ .
- $p_{st}$ : Static pressure in Pa.
- SFP: Specific fan power in  $W/m^3/s$ .
- P: Input power in W.
- Measurement category: D.
- Efficiency category: total.
- Fan efficiency without VSD.
- Air flow data in accordance with ISO 5801.
- Sound pressure level dB(A), measured in a free field distance equal to 3 times the diameter, with a minimum of 1,5 m.

<b>MC</b>	Measurement category
<b>EC</b>	Efficiency category
<b>VSD</b>	Speed control: supplied with the fan
<b>SR</b>	Specific ratio
$\eta$ [%]	Efficiency
<b>N</b>	Efficiency grade
<b>[kW]</b>	Absorbed power
<b>[m<sup>3</sup>/h]</b>	Air volume
<b>[Pa]</b>	Static pressure
<b>[RPM]</b>	Speed

### EXAMPLE CURVE

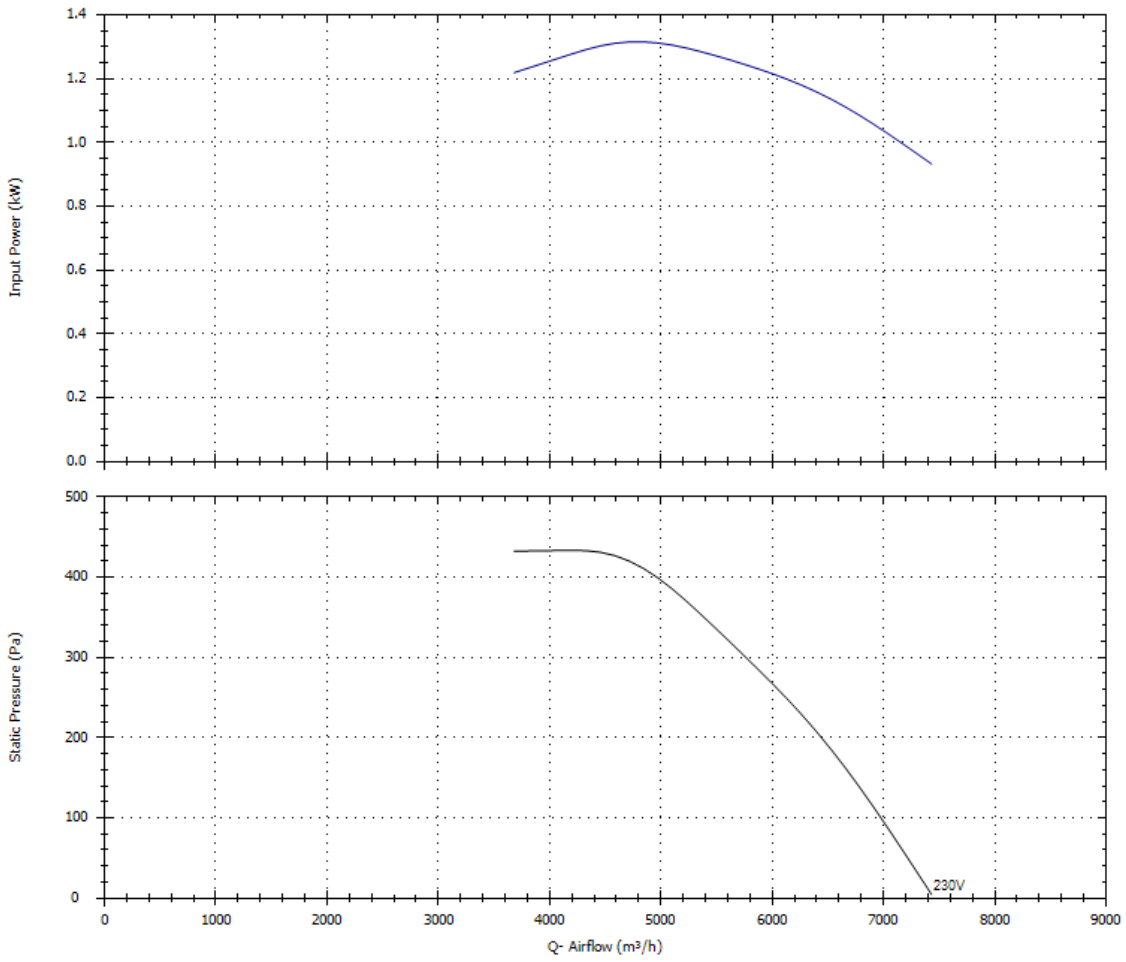
TCBBx2/4-500



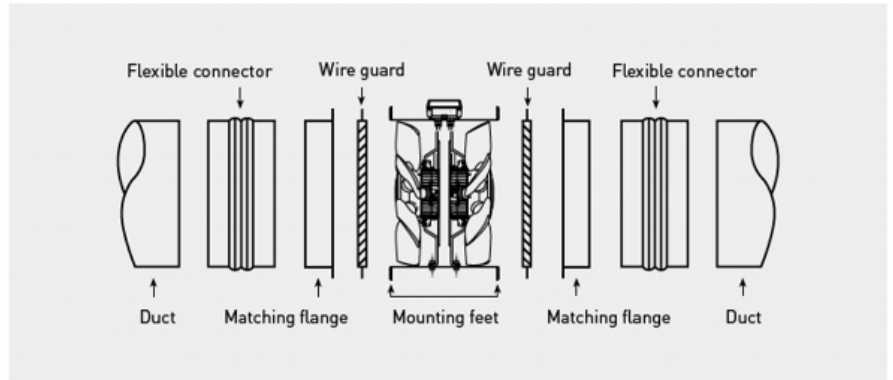
MC*	EC*	VSD*	SR*	$\eta$ [%]*	N*	[kW]	[m <sup>3</sup> /h]	[Pa]	[RPM]
D	Total	No	1	50,0	54,5	1,939	6832	514	1393

\* See example curve.

## + Curves



## + Mounting Accessories



AIR CONDITIONING

**APPENDIX**

**C**

Panasonic has developed a range of products designed for you, better than ever before. With its innovative design, high efficiency and incomparable purification system, the Etherea range has been designed with your clients in mind.

Panasonic air conditioners provide more savings and more comfort

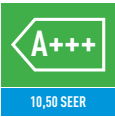
We believe that going green shouldn't compromise on comfort. That's why Panasonic is introducing the new Econavi system; combining human sensor and control program technology to detect and reduce energy waste by 38% . Our super silent air conditioners guarantee the purest air to take care of

you and your family. And, for a cleaner living environment, the new nanoe™ helps purify the air as well as your surroundings. Together, these breakthrough technologies define what Panasonic's Eco Clean Life Innovation is all about – innovations that improve our environment while making life as comfortable as possible.

Energy saving



Intelligent Human Activity Sensor and new Sunlight Sensor technologies that can detect and reduce waste by optimising air conditioner according to room conditions. With just one touch of a button, you can save energy.



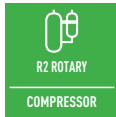
Exceptional Seasonal Cooling Efficiency based on the new ErP regulation. Higher SEER ratings mean greater efficiency. Save all the year while cooling!



Exceptional Seasonal Heating Efficiency based on the new ErP regulation. Higher SCOP ratings mean greater efficiency. Save all the year while heating!



The A Inverter system provides energy savings of up to 50%. Both you and nature wins!



Panasonic R2 Rotary Compressor. Designed to withstand extreme conditions, it delivers high performance and efficiency.



Our heat pumps containing the new refrigerant R32 show a drastic reduction in the value of Global Warming Potential (GWP). An important step to reduce greenhouse gases. R32 is also a components refrigerant, making it easy to recycle.

High performance and healthy air



New nanoe™ utilises nano-technology fine particles to purify the air in the room. It works effectively on airborne and adhesive micro-organisms such as bacteria, viruses and mould. Seal of Approval of the British Allergy Foundation.



Particulate matter (PM2,5) can be found suspended in the air, including dust, dirt, smoke and liquid droplets. Sized at 2,5µm, these particles are said to pose health problems as they can easily enter our lungs.



With Super Quiet technology our devices are much more quiet than a library (30dB(A)).



The Perfect Humidity Air controls the humidity level in the air to prevent over-dryness.



More comfort with Aerowings. Direct airflow to ceiling to create shower cooling effect by twin flap built in indoor.



Down to -10°C in cooling only mode. The air conditioner works in cooling only mode with an outdoor temperature of -10°C.



Down to -15°C in heating mode. The air conditioner works in heat pump mode with an outdoor temperature as low as -15°C.



Summer House, this innovative function keeps the house at 7/8°C to avoid freezing pipes during the winter. This function is highly appreciated in summer house or week end houses.



The Panasonic renewal system allows good quality existing R22 pipe work to be re-used whilst installing new high efficiency R410A systems.



The Panasonic renewal system allows good quality existing R410A or R22 pipe work to be re-used whilst installing new high efficiency R32 systems.



5 Years Warranty. We guarantee the outdoor unit compressors in the entire range for five years.

High connectivity



New Domestic integration to P-Line - CZ-CAPRA1. Can connect all ranges to P-Line. Full control is now possible.



Internet Control is a next generation system providing a user-friendly remote controller of air conditioning or heat pump units from everywhere, using a simple Android or iOS smartphone, tablet or PC via internet.



The communication port is integrated into the indoor unit and provides easy connection to, and control of, your Panasonic heat pump to your home or building management system.

# NEW R32 REFRIGERANT GAS



**A 'small' change that changes everything**

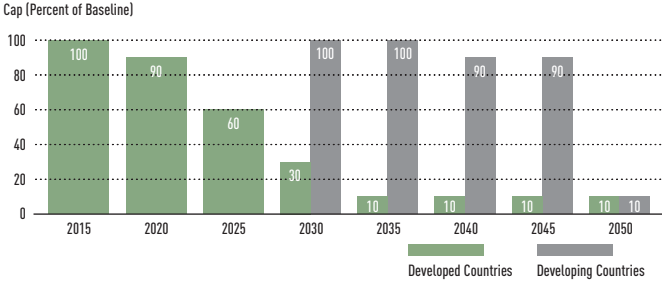
Not everyone is ready for change. Indeed, there are some who resist the future. But at Panasonic we will keep believing in technologies that improve people's lives. Which is why we are now presenting a new generation of air conditioners with R32, an innovative refrigerant in all ways imaginable: it is easy to install, environmentally friendly and saves energy. The result? Greater wellbeing for people and for the planet. Because there will always be people who resist change. But we say: Goodbye yesterday. Hello R32.

**Today Panasonic. Tomorrow everyone.**

European regulation CE 517/2014 makes the replacement of fluorinated gases (F-gases) compulsory, such as R410A, for environmental reasons, although it also grants a transition period from 2017 to 2030.

Must we wait? No. Our commitment to innovation is not hampered by dates. Which is why we are jumping the gun and are now presenting our new generation of air conditioners that employ the R32 refrigerant.

**HCFC phase-down schedule.**



\* By replacing R22 with R32 we are significantly reducing the ozone depletion potential of our air conditioners. The use of air conditioning is rapidly increasing in developing countries thus making it increasingly necessary to use refrigerants with low global warming potential.

**Goodbye yesterday**

The new generation of air conditioners with R32 represents innovation in every way. Shall we list them?

**1. Installation innovation.**

- Extremely easy to install, practically the same as for the R410A. (Just remember to verify that the pressure gauge and vacuum pump are compatible with the R32)
- This refrigerant is 100% pure, which makes it easier to recycle and reuse

**2. Environmental innovation.**

- Zero impact on the ozone layer
- 75% less impact on global warming

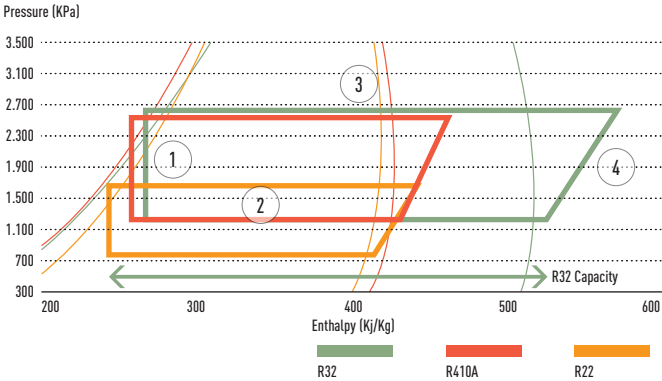
	R410A	R32
Composition	Blend of 50% R32 + 50% R125	Pure R32. (No blend)
GWP (Global Warming Potential)	2.087,5	675
ODP (Ozone Depletion Potential)	0	0

R32 is a refrigerant with just one-third the global warming potential of R410A, meaning less risk of damage to the environment.

**3. Economic and energy consumption innovation.**

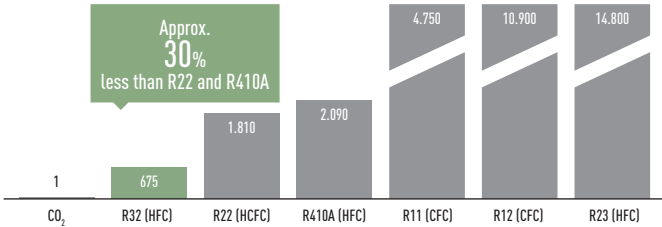
- Lower cost and greater savings:
  - 30% less refrigerant
- Higher energy efficiency A+++ than R410A
- R32 consumes less energy when there are extreme temperatures outside

LCCP: Life Cycle Climate Performance (lower global warming impact). Safety: Low toxicity level.

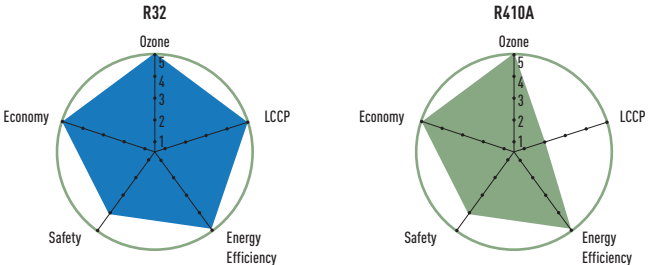


1. Expansion. 2. Evaporization. 3. Condensation. 4. Compression.

**100 Year global warming potential of different refrigerants.**



IPCC Fourth Assessment Report. Values for 100 years warming potential.



# FEATURE COMPARISON

MODELS	WALL MOUNTED HEATCHARGE VZ INVERTER+ • R32 GAS	WALL MOUNTED ETHEREA INVERTER+ SILVER / WHITE • R32 GAS	WALL MOUNTED ETHEREA INVERTER+ SILVER / MATT PEARL WHITE • R32 GAS	WALL MOUNTED ETHEREA INVERTER+ SILVER / MATT PEARL WHITE • R410A GAS	NEW WALL MOUNTED TZ COMPACT STYLE • R32 GAS	NEW WALL MOUNTED TE COMPACT STYLE • R410A GAS	WALL MOUNTED KE TYPE STANDARD INVERTER • R410A GAS	WALL MOUNTED BE TYPE STANDARD INVERTER • R410A GAS	WALL MOUNTED DE TYPE STANDARD INVERTER • R410A GAS	WALL MOUNTED UZ TYPE STANDARD INVERTER • R32 GAS	WALL MOUNTED PZ TYPE STANDARD INVERTER • R32 GAS	WALL MOUNTED PROFESSIONAL INVERTER -20°C • R410A GAS	FLOOR CONSOLE TYPE INVERTER+ • R410A GAS	4-WAY 60x60 CASSETTE STANDARD INVERTER • R410A GAS	LOW STATIC PRESSURE HIDE AWAY STANDARD INVERTER • R410A GAS
Econavi	✓ Sunlight Detection	✓	✓	✓											
Inverter+ system	✓	✓	✓	✓								✓	✓		
Inverter system					✓	✓				✓	✓			✓	✓
R2 Rotary Compressor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Refrigerant R32	✓	✓	✓		✓					✓	✓				
nanoe™	✓	✓	✓	✓											
PM2.5 Filter					✓	✓	✓			✓					
Antiallergy properties	✓	✓	✓	✓											
Super Quiet*	✓	✓ 19dB(A) for XJ/Z20, XJ/Z25 and XJ/Z35	✓ 19dB(A) for XJ/Z7, XJ/Z9 and XJ/Z12	✓ 20dB(A) for XE/E7, XE/E9 and XE/E12	✓ 20dB(A) for TZ25 and TZ35	✓ 20dB(A) for TE25 and TE35	✓ 20dB(A) for KE25 and KE35	✓ 20dB(A) for BE25 and BE35	✓ 20dB(A) for DE25 and DE35	✓ 20dB(A) for UZ9 and UZ12	✓ 20dB(A) for PZ9 and PZ12	✓ 23dB(A) for E9	✓ 23dB(A) for E9	✓ 23dB(A) for E9 and E12	
Mild Dry Cooling		✓	✓	✓											
Aerowings		✓	✓	✓		✓									
Down to -10°C in cooling only	✓	✓	✓	✓	✓	✓						✓ -15°C		✓	✓
Down to -15°C in heating mode	✓ -35°C	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓ -20°C	✓ -10°C	✓ -10°C	✓ -10°C
Summer House	✓														
R22 renewal	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
R410A/R22 Renewal	✓	✓	✓		✓					✓	✓				
Odour-removing function	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Removable, washable panel	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Powerful mode	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Soft dry operation mode	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Personal airflow creation	✓	✓	✓	✓	✓ For TZ50, TZ60 and TZ71	✓ For TE50 and TE60									
Automatic vertical airflow control					✓ For TZ20, TZ25, TZ35 and TZ42	✓ For TE20, TE25, TE35 and TE42			✓	✓			✓	✓	
Manual horizontal airflow control					✓ For TZ20, TZ25, TZ35 and TZ42	✓ For TE20, TE25, TE35 and TE42			✓	✓			✓		
AUTO mode (Inverter)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Simple Auto Changeover	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Hot start mode	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Real time clock with dual ON&OFF timer	✓	✓	✓	✓								✓			
Real time clock with single ON&OFF timer					✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
LCD Wireless remote controller	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Automatic restart	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Long piping	✓ 15 m	✓ 15 m 20 m (XJ/Z50)	✓ 15 m 20 m (XJ/Z18)	✓ 15 m 20 m (XE/E18-21) 30 m (XE/E24-28)	✓ 15 m 20 m (TZ50) 30 m (TZ71)	✓ 15 m 20 m (TE50) 30 m (TE71)	✓ 15 m	✓ 15 m	✓ 15 m	✓ 15 m	✓ 15 m	✓ 15 m 20 m (E18)	✓ 15 m 20 m (E18)	✓ 20 m (E18-21) 30 m (E18)	✓ 20 m (E18)
Top-Panel maintenance access	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Self-diagnosis function	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
CZ-CAPRA1: CZ-CNT port integration to PACI and ECOi	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Internet Control	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓		
Easy control by BMS	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓
Warranty on the compressor	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

\* At the lowest fan speed.

# WALL MOUNTED HEATCHARGE VZ INVERTER+ • R32 GAS



## heatcharge

The new Heatcharge from Panasonic has the capacity to store heat on the outdoor unit which allows heating to start quickly just after turning on the heat pump. It also ensures maximum comfort and heat in the house even during defrost operation as Heat charge also stores heat to prevent cool air during defrost.

Econavi builds-in a new Sunlight Detection technology to adjust output ideally thereby giving you the best comfort at anytime whilst saving energy.

Furthermore, the nanoe™ revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

### Technical focus

- R32 gas environmental friendly
- Performance tested at -35°C Outdoor temperature
- Energy Charge System. Heat storage unit which realizes NON-STOP heating and fast heating function
- Maximum efficiency and comfort with Econavi sensor
- nanoe™ air purifying system, 99% effective on both airborne and adhesive mould, viruses and bacteria
- Super Quiet! Only 18dB(A), equivalent to night-time in the country
- More powerful airflow to quickly reach the desired temperature

Kit			KIT-VZ9-SKE	KIT-VZ12-SKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,60 - 3,00)	3,50 (0,60 - 4,00)
<b>SEER</b>		<b>W/W</b>	<b>10,50</b> A+++	<b>10,00</b> A+++
Pdesign (cooling)		kW	2,5	3,5
Input power cooling	Nominal (Min - Max)	kW	0,43 (0,14 - 0,61)	0,80 (0,14 - 1,01)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a		
Heating capacity	Nominal (Min - Max)	kW	3,60 (0,60 - 7,80)	4,20 (0,60 - 9,20)
COP <sup>1)</sup>		W/W	5,63 A	5,04 A
Heating capacity at -7°C		kW	5,00	5,60
COP at -7°C <sup>1)</sup>		W/W	2,07	2,00
<b>SCOP</b>		<b>W/W</b>	<b>6,20</b> A+++	<b>5,90</b> A+++
Pdesign at -10°C		kW	3,6	4,2
Input power heating	Nominal (Min - Max)	kW	0,64 (0,14 - 2,72)	0,83 (0,14 - 3,16)
Annual electricity consumption (heating) <sup>3)</sup>		kWh/a		
<b>Indoor Unit</b>			<b>CS-VZ9SKE</b>	<b>CS-VZ12SKE</b>
Power source		V	230	230
Recommended fuse		A	16	16
Connection		mm <sup>2</sup>	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /min	17,0	17,5
Sound pressure <sup>3)</sup>	Cooling (Hi / Lo / Q-Lo)	dB(A)	44 / 27 / 18	45 / 33 / 18
	Heating (Hi / Lo / Q-Lo)	dB(A)	44 / 26 / 18	45 / 29 / 18
Dimensions / Net weight	H x W x D	mm / kg	295 x 798 x 375 / 14,5	295 x 798 x 375 / 14,5
<b>Outdoor Unit</b>			<b>CU-VZ9SKE</b>	<b>CU-VZ12SKE</b>
Air volume	Cooling / Heating	m <sup>3</sup> /min	33,0 / 31,5	34,2 / 31,5
Sound pressure <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	49 / 49	50 / 50
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	630 x 799 x 299 / 39,5	630 x 799 x 299 / 39,5
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 12	3 - 15 / 12
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 20	7,5 / 20
Refrigerant (R32)		kg / TCO <sub>2</sub> Eq.	1,05 / 0,70875	1,10 / 0,7425
Operating range	Cooling Min - Max	°C	-10 ~ +43	-10 ~ +43
	Heating Min - Max	°C	-35 ~ +24	-35 ~ +24

Accessories	
<b>PA-AC-WIFI-1</b>	Full bidirectional Wifi interface for Internet control
<b>PAW-IR-WIFI-1</b>	IR Wifi interface for Internet control

Accessories	
<b>PAW-SMSCONTROL</b>	Control by SMS (need additional SIM card)

1) EER and COP classification is at 230 V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure level of the units shows the value measured of a position 1 meter in front of the main body and 0,8 m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. 4) Add 70mm for piping port.



R32

ECONAVI

38%

10,50 SEER

6,20 SCOP

INVERTER+

R2 ROTARY COMPRESSOR

99%

18dB(A)

HEATING MODE

SUMMER HOUSE

R410A/R32 RENEWAL

INTERNET CONTROL

CONNECTIVITY

BMS

5 YEARS WARRANTY

SEER and SCOP: For KIT-VZ9-SKE. -35°C HEATING MODE: Heating performance tested at -35°C by SP, European third party laboratory. INTERNET CONTROL: Optional.



# WALL MOUNTED ETHEREA INVERTER+ SILVER / PURE WHITE MATT • R32 GAS

— ETHEREA —



Etherea with enhanced Econavi sensor and new nanoe™ air-purifying system.

### Outstanding efficiency, comfort and healthy air combined with state-of-the-art design.

Econavi features an in-built human activity sensor and a new sunlight detection technology to adjust output thereby giving you the best comfort at anytime whilst saving energy. Econavi not only optimizes air flow orientation and volume according to human presence, it also reduces cooling power automatically by no/less sunshine. With Econavi, energy savings of up to 38% are possible, whilst increasing your comfort. Furthermore, the nanoe™ revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

### Technical focus

- R32 gas environmental friendly
- Maximum efficiency and comfort with Econavi sensor
- nanoe™ air purifying system, 99% effective on both airborne and adhesive mould, viruses, bacteria and pollen allergen
- Aerowings to control air draft direction
- Mild Dry Cooling: prevent a rapid decrease in room humidity
- Super Quiet! Only 19dB(A), equivalent to night-time in the countryside
- More powerful airflow to quickly reach the desired temperature
- Wired control (Optional)
- Smartphone control (Optional)



Kit Silver			KIT-XZ20-TKE	KIT-XZ25-TKE	KIT-XZ35-TKE	—	KIT-XZ50-TKE	—
Kit Pure White Matt			KIT-Z20-TKE	KIT-Z25-TKE	KIT-Z35-TKE	KIT-Z42-TKE	KIT-Z50-TKE	KIT-Z71-TKE
Cooling capacity	Nominal (Min - Max)	kW	2,05 (0,75 - 2,40)	2,50 (0,85 - 3,20)	3,50 (0,85 - 4,00)	4,20 (0,85 - 5,00)	5,00 (0,98 - 6,00)	7,10 (0,98 - 8,50)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	4,56 (3,13 - 4,32) A	4,81 (3,54 - 4,05) A	4,22 (3,54 - 3,81) A	3,39 (3,27 - 3,18) A	3,55 (3,50 - 3,08) A	3,27 (2,33 - 2,93) A
SEER		W/W	7,50 A+++	8,50 A+++	8,50 A+++	6,90 A++	7,90 A+++	6,50 A+++
Pdesign (cooling)		kW	2,1	2,5	3,5	4,2	5,0	7,1
Input power cooling	Nominal (Min - Max)	kW	0,45 (0,24 - 0,56)	0,52 (0,24 - 0,79)	0,83 (0,24 - 1,05)	1,24 (0,26 - 1,57)	1,41 (0,28 - 1,95)	2,17 (0,42 - 2,90)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	98	103	144	213	222	382
Heating capacity	Nominal (Min - Max)	kW	2,80 (0,70 - 4,00)	3,40 (0,80 - 5,00)	4,00 (0,80 - 5,80)	5,30 (0,80 - 6,80)	5,80 (0,98 - 8,00)	8,60 (0,98 - 10,20)
Heating capacity at -7°C		kW	2,38	2,95	3,40	4,11	4,80	6,31
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,52 (3,89 - 4,04) A	4,79 (4,44 - 3,97) A	4,44 (4,44 - 3,87) A	3,68 (4,21 - 3,51) A	4,03 (2,88 - 3,16) A	3,66 (2,45 - 3,46) A
SCOP		W/W	4,70 A+++	5,10 A+++	5,10 A+++	4,00 A+	4,70 A+++	4,20 A+
Pdesign at -10°C		kW	2,1	2,7	3,2	3,6	4,2	5,5
Input power heating	Nominal (Min - Max)	kW	0,62 (0,18 - 0,99)	0,71 (0,18 - 1,26)	0,90 (0,18 - 1,50)	1,44 (0,19 - 1,94)	1,44 (0,34 - 2,53)	2,35 (0,40 - 2,95)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	626	741	878	1.260	1.251	1.833
<b>Indoor Unit Silver</b>			<b>CS-XZ20TKEW</b>	<b>CS-XZ25TKEW</b>	<b>CS-XZ35TKEW</b>	—	<b>CS-XZ50TKEW</b>	—
<b>Indoor Unit Pure White Matt</b>			<b>CS-Z20TKEW</b>	<b>CS-Z25TKEW</b>	<b>CS-Z35TKEW</b>	<b>CS-Z42TKEW</b>	<b>CS-Z50TKEW</b>	<b>CS-Z71TKEW</b>
Power source		V	230	230	230	230	230	230
Recommended fuse		A	16	16	16	16	16	—
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5	4 x 1,5	4 x 2,5	—
Air volume	Cooling / Heating	m <sup>3</sup> /min	9,9 / 10,8	10,0 / 11,5	10,7 / 12,4	11,2 / 12,3	19,2 / 21,3	19,8 / 21,5
Moisture removal volume		L/h	1,3	1,5	2,0	2,4	2,8	4,1
Sound pressure <sup>3)</sup>	Cooling (Hi / Lo / Q-Lo)	dB(A)	37 / 24 / 19	39 / 25 / 19	42 / 28 / 19	43 / 31 / 25	44 / 37 / 30	47 / 38 / 30
	Heating (Hi / Lo / Q-Lo)	dB(A)	38 / 25 / 19	41 / 27 / 19	43 / 33 / 19	43 / 35 / 29	44 / 37 / 30	47 / 38 / 30
Dimensions / Net weight	H x W x D	mm / kg	295 x 919 x 194 / 9	295 x 919 x 194 / 10	295 x 919 x 194 / 10	295 x 919 x 194 / 10	302 x 1.120 x 236 / 12	299 x 1.120 x 236 / 13
<b>Outdoor</b>			<b>CU-Z20TKE</b>	<b>CU-Z25TKE</b>	<b>CU-Z35TKE</b>	<b>CU-Z42TKE</b>	<b>CU-Z50TKE</b>	<b>CU-Z71TKE</b>
Air volume	Cooling / Heating	m <sup>3</sup> /min	26,9 / 26,9	28,7 / 28,7	34,4 / 35,6	33,3 / 33,7	39,7 / 38,6	44,7 / 45,8
Sound pressure <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	45 / 46	46 / 47	48 / 50	49 / 51	47 / 47	52 / 54
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 30	542 x 780 x 289 / 31	619 x 824 x 299 / 34	619 x 824 x 299 / 32	695 x 875 x 320 / 42	695 x 875 x 320 / 49
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 5/8 (15,88)
Piping length range / Elevation difference (in/out) <sup>5)</sup>		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 20 / 15	3 - 30 / 20
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 15	10 / 25
Refrigerant (R32)		kg / TCO <sub>2</sub> Eq.	0,76 / 0,513	0,85 / 0,574	0,91 / 0,614	0,87 / 0,587	1,11 / 0,749	1,37 / 0,925
Operating range	Cooling / Heating Min - Max	°C	-10 ~ +43 / -15 ~ +24	-10 ~ +43 / -15 ~ +24	-10 ~ +43 / -15 ~ +24	-10 ~ +43 / -15 ~ +24	-10 ~ +43 / -15 ~ +24	-10 ~ +43 / -15 ~ +24

Accessories	
PA-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote controller for wall type
CZ-CAPRA1	H Generation interface to ECOi control integration

1) EER and COP classification is at 230V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure of the units shows the value measured of a position 1m in front of the main body and 0,8m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: Quiet mode. Lo: The lowest fan speed. 4) Add 70mm for piping part. 5) When installing the outdoor unit at a higher position than the indoor unit. \* Tentative values.



R32

ECONAVI 38%

A+++ 8,50 SEER

A+++ 5,10 SCOP

INVERTER+

R2 ROTARY COMPRESSOR

99%

19dB(A) SUPER QUIET

MILD DRY HUMIDITY CONTROL

AEROWINGS

R410A/R32/R236A/R32 RENEWAL

INTEGRATION P-LINE

INTERNET CONTROL

CONNECTIVITY BMS

5 YEARS WARRANTY

SEER and SCOP: For KIT-XZ25-TKE, KIT-XZ35-TKE, KIT-Z25-TKE and KIT-Z35-TKE. SUPER QUIET: For KIT-XZ20-TKE, KIT-XZ25-TKE, KIT-XZ35-TKE, KIT-Z20-TKE, KIT-Z25-TKE and KIT-Z35-TKE. INTERNET CONTROL: Optional.  
 Rating Conditions: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 35°C DB / 24°C WB. Heating Indoor 20°C DB. Heating Outdoor 7°C DB / 6°C WB. (DB: Dry Bulb; WB: Wet Bulb)  
 Specifications subject to change without notice. For detailed information about ErP, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

# WALL MOUNTED ETHEREA INVERTER+ SILVER / MATT PEARL WHITE • R32 GAS



ETHEREA

Etherea with enhanced Econavi sensor and new nanoe™ air-purifying system.

### Outstanding efficiency, comfort and healthy air combined with state-of-the-art design.

Econavi features an in-built human activity sensor and a new sunlight detection technology to adjust output thereby giving you the best comfort at anytime whilst saving energy. Econavi not only optimizes air flow orientation and volume according to human presence, it also reduces cooling power automatically by no/less sunshine. With Econavi, energy savings of up to 38% are possible, whilst increasing your comfort.

Furthermore, the nanoe™ revolutionary air-purifying system utilises nano technology fine particles to remove and deactivate 99% of both airborne and adhesive micro-organisms like bacteria, viruses and mould.

### Technical focus

- R32 gas environmental friendly
- Maximum efficiency and comfort with Econavi sensor
- nanoe™ air purifying system, 99% effective on both airborne and adhesive mould, viruses, bacteria and pollen allergen
- Aerowings to control air draft direction
- Mild Dry Cooling: prevent a rapid decrease in room humidity
- Super Quiet! Only 19dB(A), equivalent to night-time in the countryside
- More powerful airflow to quickly reach the desired temperature
- Wired control (Optional)
- Smartphone control (Optional)



Wall Mounted Etherea  
Matt Pearl White

Kit Silver			KIT-XZ7-SKE	KIT-XZ9-SKE	KIT-XZ12-SKE	—	KIT-XZ18-SKE
Kit Matt Pearl White			KIT-Z7-SKEM	KIT-Z9-SKEM	KIT-Z12-SKEM	KIT-Z15-SKEM	KIT-Z18-SKEM
Cooling capacity	Nominal (Min - Max)	kW	2,05 (0,75 - 2,40)	2,50 (0,85 - 3,00)	3,50 (0,85 - 4,00)	4,20 (0,85 - 5,00)	5,00 (0,98 - 5,60)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	4,56 (3,13 - 4,32) A	4,76 (3,54 - 4,20) A	4,17 (3,54 - 3,77) A	3,39 (3,27 - 3,18) A	3,33 (3,50 - 3,26) A
SEER		W/W	7,50 A++	8,50 A+++	8,50 A+++	6,90 A++	7,30 A++
Pdesign (cooling)		kW	2,1	2,5	3,5	4,2	5,0
Input power cooling	Nominal (Min - Max)	kW	0,45 (0,24 - 0,56)	0,53 (0,24 - 0,72)	0,84 (0,24 - 1,06)	1,24 (0,26 - 1,57)	1,50 (0,28 - 1,72)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	225	263	420	620	750
Heating capacity	Nominal (Min - Max)	kW	2,80 (0,70 - 4,00)	3,40 (0,80 - 5,00)	4,00 (0,80 - 5,80)	5,30 (0,80 - 6,80)	5,80 (0,98 - 7,50)
Heating capacity at -7°C		kW	2,38	2,95	3,40	4,11	4,66
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,52 (3,89 - 4,04) A	4,72 (4,44 - 3,94) A	4,35 (4,44 - 3,82) A	3,68 (4,21 - 3,51) A	3,41 (2,88 - 3,19) B
SCOP		W/W	4,70 A++	4,90 A++	4,90 A++	4,00 A+	4,40 A+
Pdesign at -10°C		kW	2,1	2,7	3,2	3,6	4,2
Input power heating	Nominal (Min - Max)	kW	0,62 (0,18 - 0,99)	0,72 (0,18 - 1,27)	0,92 (0,18 - 1,52)	1,44 (0,19 - 1,94)	1,70 (0,34 - 2,35)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	626	771	914	1.260	1.336
<b>Indoor Unit Silver</b>			<b>CS-XZ7SKEW</b>	<b>CS-XZ9SKEW</b>	<b>CS-XZ12SKEW</b>	—	<b>CS-XZ18SKEW</b>
<b>Indoor Unit Matt Pearl White</b>			<b>CS-Z7SKEW-M</b>	<b>CS-Z9SKEW-M</b>	<b>CS-Z12SKEW-M</b>	<b>CS-Z15SKEW-M</b>	<b>CS-Z18SKEW-M</b>
Power source		V	230	230	230	230	230
Recommended fuse		A	16	16	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5	4 x 1,5	4 x 2,5
Air volume	Cooling / Heating	m <sup>3</sup> /min	9,9 / 10,8	10,0 / 11,3	10,7 / 12,0	11,2 / 12,2	11,7 / 12,4
Moisture removal volume		L/h	1,3	1,5	2,0	2,4	2,8
Sound pressure <sup>3)</sup>	Cooling (Hi / Lo / Q-Lo)	dB(A)	37 / 24 / 19	39 / 25 / 19	42 / 28 / 19	43 / 31 / 25	44 / 37 / 34
	Heating (Hi / Lo / Q-Lo)	dB(A)	38 / 25 / 19	40 / 27 / 19	42 / 33 / 19	43 / 35 / 29	44 / 37 / 34
Dimensions / Net weight	H x W x D	mm / kg	295 x 919 x 194 / 9	295 x 919 x 194 / 10	295 x 919 x 194 / 10	295 x 919 x 194 / 10	295 x 919 x 194 / 10
<b>Outdoor</b>			<b>CU-Z7SKE</b>	<b>CU-Z9SKE</b>	<b>CU-Z12SKE</b>	<b>CU-Z15SKE</b>	<b>CU-Z18SKE</b>
Air volume	Cooling / Heating	m <sup>3</sup> /min	26,9 / 26,9	28,7 / 28,7	34,4 / 35,6	33,3 / 33,7	39,2 / 37,9
Sound pressure <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	45 / 46	46 / 47	48 / 50	49 / 51	47 / 47
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 30	542 x 780 x 289 / 33	619 x 824 x 299 / 35	619 x 824 x 299 / 32	695 x 875 x 320 / 46
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out) <sup>5)</sup>		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 20 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 10	7,5 / 15
Refrigerant (R32)		kg / TCO: Eq.	0,76 / —	0,85 / —	0,91 / —	0,87 / —	1,03 / —
Operating range	Cooling Min - Max	°C	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43	-10 ~ +43
	Heating Min - Max	°C	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24

Accessories	
PA-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote controller for wall type
CZ-CAPRA1	H Generation interface to ECOi control integration

1) EER and COP classification is at 230V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure of the units shows the value measured of a position 1m in front of the main body and 0,8m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: Quiet mode. Lo: The lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.



R32

38%  
ECONAVI

A+++  
8,50 SEER

A++  
4,98 SCOP

INVERTER+

R2 ROTARY COMPRESSOR

99%  
nanoe™

19dB(A)  
SUPER QUIET

HUMIDITY CONTROL  
MILD DRY

AEROWINGS

R410A/R32 RENEWAL

INTEGRATION P-LINE

INTERNET CONTROL

CONNECTIVITY

5 YEARS WARRANTY

SEER and SCOP: For KIT-XZ9-SKE and KIT-Z9-SKE. SUPER QUIET: For KIT-XZ7-SKE, KIT-XZ9-SKE, KIT-XZ12-SKE, KIT-Z7-SKE, KIT-Z9-SKE and KIT-Z12-SKE. INTERNET CONTROL: Optional.



# WALL MOUNTED UZ TYPE STANDARD INVERTER • R32 GAS



New UZ series inverter powerful and efficient.



### Technical focus

- **NEW!** New design
- R32 gas environmental friendly
- PM2,5 Filter to create clean and comfort indoor quality
- Super Quiet! Only 20dB(A)
- High energy savings
- This units can be installed on R22 pipings
- Long connection distance
- Wired control (Optional)
- Smartphone control (Optional)



Kit*			KIT-UZ9-SKE	KIT-UZ12-SKE	KIT-UZ18-SKE	KIT-UZ60-TKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,40 (0,85 - 3,90)	5,00 (0,98 - 5,40)	6,25 (0,98 - 7,10)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,68 (3,40 - 3,33) A	3,18 (3,33 - 3,05) B	3,03 (3,44 - 2,90) B	3,24 (3,50 - 2,96) A
<b>SEER</b>		<b>W/W</b>	<b>6,20</b> A++	<b>6,10</b> A++	<b>6,50</b> A++	<b>6,20</b> A++
Pdesign (cooling)		kW	2,5	3,4	5,0	6,3
Input power cooling	Nominal (Min - Max)	kW	0,68 (0,25 - 0,90)	1,07 (0,26 - 1,28)	1,65 (0,29 - 1,86)	1,93 (0,28 - 2,40)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	340	535	825	965
Heating capacity	Nominal (Min - Max)	kW	3,15 (0,80 - 3,60)	3,84 (0,80 - 4,40)	5,40 (0,98 - 7,50)	6,80 (0,98 - 8,50)
Heating capacity at -7°C		kW	2,14	2,60	4,58	5,24
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,04 (4,10 - 3,46) A	3,66 (4,10 - 3,41) A	3,42 (2,80 - 3,06) B	3,51 (2,88 - 3,11) B
<b>SCOP</b>		<b>W/W</b>	<b>3,80</b> A	<b>3,80</b> A	<b>3,90</b> A	<b>3,90</b> A
Pdesign at -10°C		kW	1,9	2,4	4,0	4,6
Input power heating	Nominal (Min - Max)	kW	0,78 (0,20 - 1,04)	1,05 (0,20 - 1,29)	1,58 (0,35 - 2,45)	1,94 (0,34 - 2,73)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	700	884	1.436	1.651
<b>Indoor Unit</b>			<b>CS-UZ9SKE</b>	<b>CS-UZ12SKE</b>	<b>CS-UZ18SKE</b>	<b>CS-UZ60TKE</b>
Power source		V	230	230	230	230
Recommended fuse		A	16	16	16	—
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 2,5	—
Air volume	Cooling / Heating	m <sup>3</sup> /min	10,3 / 11,0	10,7 / 11,2	11,3 / 12,0	16,9 / 18,7
Moisture removal volume		L/h	1,5	2,0	2,8	3,5
Sound pressure <sup>3)</sup>	Cooling (Hi / Lo / Q-Lo)	dB(A)	37 / 26 / 20	38 / 30 / 20	44 / 37 / 34	45 / 37 / 31
	Heating (Hi / Lo / Q-Lo)	dB(A)	37 / 27 / 24	38 / 33 / 25	44 / 37 / 34	45 / 37 / 34
Dimensions / Net weight	H x W x D	mm / kg	290 x 850 x 199 / 8	290 x 850 x 199 / 8	290 x 870 x 214 / 9	290 x 1.070 x 240 / 12
<b>Outdoor Unit</b>			<b>CU-UZ9SKE</b>	<b>CU-UZ12SKE</b>	<b>CU-UZ18SKE</b>	<b>CU-UZ60TKE</b>
Air volume	Cooling / Heating	m <sup>3</sup> /min	31,2 / 31,2	31,1 / 31,1	34,4 / 34,0	42,6 / 41,5
Sound pressure <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	48 / 49	48 / 50	48 / 49	49 / 49
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 26	542 x 780 x 289 / 27	619 x 824 x 299 / 38	695 x 875 x 320 / 43
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15	3 - 30 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 15	7,5 / 15
Refrigerant (R32)		kg / TCO <sub>2</sub> Eq.	0,58 / 0,392	0,67 / 0,452	1,14 / 0,770	1,15 / 0,776
Operating range	Cooling Min ~ Max	°C	+5 ~ +43	+5 ~ +43	+5 ~ +43	+5 ~ +43
	Heating Min ~ Max	°C	-15 ~ +24	-15 ~ +24	-15 ~ +24	-15 ~ +24

Accessories	
PA-AC-WIFI-1	Full bidirectional Wifi interface for Internet control
PAW-IR-WIFI-1	IR Wifi interface for Internet control

Accessories	
CZ-RD514C	Wired remote controller for wall type
CZ-CAPRA1	H Generation interface to ECOi control integration

1) EER and COP classification is at 230V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure of the units shows the value measured of a position 1m in front of the main body and 0,8m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed (the lowest fan speed for UZ18/60) 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.



R32

6,50 SEER

3,90 SCOP

INVERTER

R2 ROTARY COMPRESSOR

PM2,5 FILTER

SUPER QUIET

R410A/R32 RENEWAL

INTERNET CONTROL

BMS CONNECTIVITY

5 YEARS WARRANTY

SEER and SCOP: For KIT-UZ18-SKE. SUPER QUIET: For KIT-UZ9-SKE and KIT-UZ12-SKE. INTERNET CONTROL: Optional.  
 Rating Conditions: Cooling Indoor 27°C DB / 19°C WB. Cooling Outdoor 35°C DB / 24°C WB. Heating Indoor 20°C DB. Heating Outdoor 7°C DB / 6°C WB. (DB: Dry Bulb; WB: Wet Bulb)  
 Specifications subject to change without notice. For detailed information about ErP, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

# WALL MOUNTED PZ TYPE STANDARD INVERTER • R32 GAS



New PZ Inverter models are powerful and efficient.



### Technical focus

- **NEW!** New design
- R32 gas environmental friendly
- Super Quiet! Only 20dB(A)
- High energy savings
- This units can be installed on R410A and R22 pipings
- Long connection distance
- Wired control (Optional)
- Smartphone control (Optional)

Kit			KIT-PZ25-TKE	KIT-PZ35-TKE	KIT-PZ50-TKE
Cooling capacity	Nominal (Min - Max)	kW	2,50 (0,85 - 3,00)	3,40 (0,85 - 3,90)	5,00 (0,98 - 5,40)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	3,62 (3,40 - 3,30) A	3,09 (3,33 - 3,00) B	2,98 (3,44 - 2,86) C
<b>SEER</b>		<b>W/W</b>	<b>5,80</b> <b>A+</b>	<b>5,60</b> <b>A+</b>	<b>6,00</b> <b>A+</b>
Pdesign (cooling)		kW	2,5	3,4	5,0
Input power cooling	Nominal (Min - Max)	kW	0,69 (0,25 - 0,91)	1,10 (0,26 - 1,30)	1,68 (0,29 - 1,89)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	151	213	292
Heating capacity	Nominal (Min - Max)	kW	3,15 (0,80 - 3,60)	3,84 (0,80 - 4,40)	5,40 (0,98 - 7,50)
Heating capacity at -7°C		kW	2,14	2,60	4,58
COP <sup>3)</sup>	Nominal (Min - Max)	W/W	4,09 (4,10 - 3,50) A	3,69 (4,10 - 3,46) A	3,44 (2,80 - 3,07) B
<b>SCOP</b>		<b>W/W</b>	<b>4,10</b> <b>A+</b>	<b>4,10</b> <b>A+</b>	<b>4,00</b> <b>A+</b>
Pdesign at -10°C		kW	1,9	2,4	4,0
Input power heating	Nominal (Min - Max)	kW	0,77 (0,20 - 1,03)	1,04 (0,20 - 1,27)	1,57 (0,35 - 2,44)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	649	820	1.366
<b>Indoor Unit</b>			<b>CS-PZ25TKE</b>	<b>CS-PZ35TKE</b>	<b>CS-PZ50TKE</b>
Power source		V	230	230	230
Recommended fuse		A	16	16	16
Connection indoor / outdoor		mm <sup>2</sup>	4 x 1,5	4 x 1,5	4 x 1,5
Air volume	Cooling / Heating	m <sup>3</sup> /min	10,3 / 11,0	10,7 / 11,2	11,6 / 12,5
Moisture removal volume		L/h	1,5	2,0	2,8
Sound pressure <sup>3)</sup>	Cooling (Hi / Lo / Q-Lo)	dB(A)	37 / 26 / 20	38 / 30 / 20	44 / 37 / 34
	Heating (Hi / Lo / Q-Lo)	dB(A)	37 / 27 / 24	38 / 33 / 25	44 / 37 / 34
Dimensions / Net weight	H x W x D	mm / kg	290 x 850 x 199 / 8	290 x 850 x 199 / 8	290 x 870 x 214 / 9
<b>Outdoor Unit</b>			<b>CU-PZ25TKE</b>	<b>CU-PZ35TKE</b>	<b>CU-PZ50TKE</b>
Air volume	Cooling / Heating	m <sup>3</sup> /min	30,5 / 30,5	31,1 / 31,1	32,7 / 32,7
Sound pressure <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	48 / 49	48 / 50	48 / 49
Dimensions <sup>4)</sup> / Net weight	H x W x D	mm / kg	542 x 780 x 289 / 26	542 x 780 x 289 / 27	619 x 824 x 299 / 38
Piping connections	Liquid pipe / Gas pipe	Inch (mm)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 3/8 (9,52)	1/4 (6,35) / 1/2 (12,70)
Piping length range / Elevation difference (in/out)		m	3 - 15 / 15	3 - 15 / 15	3 - 15 / 15
Pipe length for additional gas / Additional gas amount		m / g/m	7,5 / 10	7,5 / 10	7,5 / 15
Refrigerant (R32)		kg / TCO <sub>2</sub> Eq.	0,58 / 0,392	0,67 / 0,452	1,14 / 0,770
Operating range	Cooling Min - Max	°C	+5 - +43	+5 - +43	+5 - +43
	Heating Min - Max	°C	-15 - +24	-15 - +24	-15 - +24

Accessories	
<b>PA-AC-WIFI-1</b>	Full bidirectional Wifi interface for Internet control
<b>PAW-IR-WIFI-1</b>	IR Wifi interface for Internet control

Accessories	
<b>CZ-RD514C</b>	Wired remote controller for wall type
<b>CZ-CAPRA1</b>	H Generation interface to ECOi control integration

1) EER and COP classification is at 230V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure of the units shows the value measured of a position 1 meter in front of the main body and 0,8m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. Q-Lo: The lowest fan speed. Lo: The second lowest fan speed. 4) Add 70mm for piping port. 5) When installing the outdoor unit at a higher position than the indoor unit.



R32

6,00 SEER

4,10 SCOP

INVERTER

R2 ROTARY COMPRESSOR

20dB(A) SUPER QUIET

R410A/R32 RENEWAL

BMS CONNECTIVITY

10 YEARS COMPRESSOR WARRANTY

SEER: For KIT-PZ50-TKE. SCOP: For KIT-PZ25-TKE and KIT-PZ35-TKE. SUPER QUIET: For KIT-PZ25-TKE and KIT-PZ35-TKE.

FREE MULTI SYSTEM Z • R32 GAS



**Outdoor Unit Free Multi System Z • R32 GAS\***

System Capacity (Min - Max Indoor Cooling Capacity Nominal)			3,2 to 5,7kW	3,2 to 6,0kW	3,2 to 7,7kW	4,5 to 9,5kW	4,5 to 11,2kW	4,5 to 11,5kW	4,5 to 13,6kW	4,5 to 17,5kW
Unit			CU-2Z35TBE	CU-2Z41TBE	CU-2Z50TBE	CU-3Z52TBE	CU-3Z68TBE	CU-4Z68TBE	CU-4Z80TBE	CU-5Z90TBE
Cooling capacity	Nominal (Min - Max)	kW	3,50 (1,50 - 4,50)	4,10 (1,50 - 5,20)	5,00 (1,50 - 5,40)	5,20 (1,90 - 7,20)	6,80 (1,90 - 8,00)	6,80 (1,90 - 8,80)	8,00 (3,00 - 9,20)	10,00 (2,90 - 11,50)
EER <sup>1)</sup>	Nominal (Min - Max)	W/W	4,86 (6,00 - 4,09) A	4,56 (6,00 - 3,80) A	4,24 (5,00 - 3,62) A	4,95 A	3,66 (7,04 - 3,38) A	4,39 (5,59 - 3,56) A	4,04 (5,66 - 3,21) A	3,5 (5,27 - 2,98) A
<b>SEER</b>	<b>W/W</b>		<b>8,50 A+++</b>	<b>8,50 A+++</b>	<b>8,50 A+++</b>	<b>8,50 A+++</b>	<b>8,00 A++</b>	<b>8,00 A++</b>	<b>7,00 A++</b>	<b>6,50 A++</b>
Pdesign (cooling)		kW	3,5	4,1	5,0	5,2	6,8	6,8	8,0	10,0
Input power cooling	Nominal (Min - Max)	kW	0,72 (0,25 - 1,10)	0,90 (0,25 - 1,37)	1,18 (0,25 - 1,49)	1,09 (0,36 - 2,18)	1,86 (0,27 - 2,37)	1,55 (0,34 - 2,47)	1,98 (0,53 - 2,87)	2,86 (0,55 - 3,86)
Annual electricity consumption (cooling) <sup>2)</sup>		kWh/a	144	169	206	214	298	298	—	—
Heating capacity	Nominal (Min - Max)	kW	4,20 (1,10 - 5,60)	4,60 (1,10 - 7,00)	5,60 (1,10 - 7,20)	6,80 (1,60 - 8,30)	8,50 (3,30 - 10,40)	8,50 (3,00 - 10,60)	9,40 (4,20 - 10,60)	12,00 (3,40 - 14,50)
Heating capacity at -7°C		kW	—	—	—	3,95	4,45	4,45	—	—
COP <sup>1)</sup>	Nominal (Min - Max)	W/W	4,88 (5,24 - 4,18) A	4,79 (5,24 - 3,91) A	4,63 (5,24 - 4,00) A	4,72 A	3,95 (5,32 - 3,64) A	4,47 (5,17 - 3,96) A	4,52 (6,00 - 3,46) A	4,20 (6,42 - 3,42) A
<b>SCOP</b>	<b>W/W</b>		<b>4,60 A++</b>	<b>4,60 A++</b>	<b>4,60 A++</b>	<b>4,20 A+</b>	<b>4,20 A+</b>	<b>4,20 A+</b>	<b>4,00 A+</b>	<b>4,00 A+</b>
Pdesign at -10°C		kW	3,2	3,5	4,2	5,0	5,2	5,8	8,0	10,0
Input power heating	Nominal (Min - Max)	kW	0,86 (0,21 - 1,34)	0,96 (0,21 - 1,79)	1,21 (0,21 - 1,80)	1,47 (3,20 - 2,17)	2,15 (0,62 - 2,86)	1,90 (0,58 - 2,68)	2,08 (0,70 - 3,06)	2,86 (0,53 - 4,24)
Annual electricity consumption (heating) <sup>2)</sup>		kWh/a	974	1,065	1,278	1,667	1,733	1,933	—	—
Current	Cooling / Heating	A	3,35 / 4,00	4,15 / 4,45	5,35 / 5,50	5,00 / 6,70	8,40 / 9,70	7,00 / 8,60	—	—
Power source		V	230	230	230	230	230	230	230	230
Recommended fuse		A	16	16	16	16	16	20	20	25
Recommended power cable section		mm <sup>2</sup>	2,5	2,5	2,5	2,5	2,5	2,5	2,5	3,5
Sound pressure <sup>3)</sup>	Cooling / Heating (Hi)	dB(A)	48 / 50	48 / 50	50 / 52	47 / 48	51 / 52	49 / 50	—	—
Dimensions <sup>4)</sup>	H x W x D	mm	619 x 824 x 299	619 x 824 x 299	619 x 824 x 299	795 x 875 x 320	795 x 875 x 320	795 x 875 x 320	999 x 940 x 340	999 x 940 x 340
Net weight		kg	39	39	39	71	71	72	80	81
Piping connections	Liquid pipe	Inch (mm)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)	1/4 (6,35)
	Gas pipe	Inch (mm)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)	3/8 (9,52)
Elevation difference (in/out)	Max	m	10	10	10	15	15	15	15	15
Piping length total	Min - Max	m	3 - 30	3 - 30	3 - 30	3 - 50	3 - 60	3 - 60	—	—
Piping length to one unit	Min - Max	m	3 - 20	3 - 20	3 - 20	3 - 25	3 - 25	3 - 25	3 - 25	3 - 25
Pipe length for additional gas / Additional gas amount	m / g/m		20 / 15	20 / 15	20 / 15	30 / 20	30 / 20	30 / 20	—	—
Operating range	Cooling Min - Max	°C	-10 - +46	-10 - +46	-10 - +46	-10 - +46	-10 - +46	-10 - +46	-10 - +46	-10 - +46
	Heating Min - Max	°C	-15 - +24	-15 - +24	-15 - +24	-15 - +24	-15 - +24	-15 - +24	-15 - +24	-15 - +24

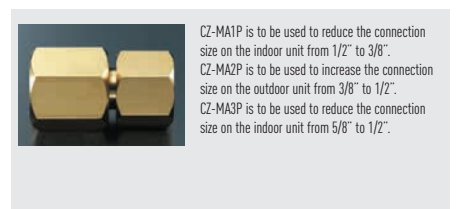
1) EER and COP classification is at 230V in accordance with EU directive 2002/31/EC. 2) The annual energy consumption is calculated in accordance with the ErP directive. 3) The Sound pressure of the units shows the value measured of a position 1m in front of the main body and 0,8m below the unit. The sound pressure is measured in accordance with Eurovent 6/C/006-97 specification. 4) Add 70 or 95mm for piping port.  
Minimum quantity of connection: 2 indoor units. \* Tentative data.

**Possible outdoor / indoor units combinations • R32 GAS**

	Etherea Silver							Etherea Pure White Matt							Wall Mounted TZ Compact Style							Low Static Pressure Hide Away							4 Way 60x60 Cassette											
	16	20	25	35	42	50	60	71	16	20	25	35	42	50	60	71	16	20	25	35	42	50	60	71	16	20	25	35	42	50	60	71	16	20	25	35	42	50	60	71
<b>CU-2Z35TBE // 3,2 - 5,7kW // 2 Rooms</b>	✓	✓	✓						✓	✓	✓						✓	✓	✓						✓	✓							✓	✓						
<b>CU-2Z41TBE // 3,2 - 6,0kW // 2 Rooms</b>	✓	✓	✓						✓	✓	✓						✓	✓	✓						✓	✓							✓	✓						
<b>CU-2Z50TBE // 3,2 - 7,7kW // 2 Rooms</b>	✓	✓	✓	✓	✓				✓	✓	✓	✓	✓				✓	✓	✓	✓	✓				✓	✓							✓	✓						
<b>CU-3Z52TBE // 4,5 - 9,5kW // 3 Rooms</b>	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓			✓	✓	✓	✓	✓	✓			✓	✓	✓						✓	✓						
<b>CU-3Z68TBE // 4,5 - 11,2kW // 3 Rooms</b>	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓					✓	✓						
<b>CU-4Z68TBE // 4,5 - 11,5kW // 4 Rooms</b>	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓				✓	✓						
<b>CU-4Z80TBE // 4,5 - 13,6kW // 4 Rooms</b>	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓						
<b>CU-5Z90TBE // 4,5 - 17,5kW // 5 Rooms</b>	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓						

1) A CZ-MA1P pipe reducer is needed on the 42 and 50, a CZ-MA2P pipe expander is needed on the 60 and CZ-MA3P pipe reducer on the 71.

Outdoor Multi combination model	Accessory
CS-MZ16TKE / CS-MZ16TKE CS-X220TKEW / CS-Z20TKEW / CS-T220TKEW / CS-TE20TKEW CS-X225TKEW / CS-Z25TKEW / CS-T225TKEW / CS-TE25TKEW / CS-E9PD3EA / CS-E9PB4EA CS-X235TKEW / CS-Z35TKEW / CS-T235TKEW / CS-TE35TKEW / CS-E120D3EAW / CS-E12PB4EA CS-Z42TKEW / CS-TZ42TKEW / CS-TE42TKEW CS-X250TKEW / CS-Z50TKEW / CS-TZ50TKEW / CS-TE50TKEW / CS-E18RD3EAW / CS-E18RB4EAW CS-E21RB4EAW CS-Z71TKEW / CS-TZ71TKEW	  —  CZ-MA1P CZ-MA2P CZ-MA3P



FREEZER AND CHILLER ROOM SPECIFICATIONS

**APPENDIX**

**D**

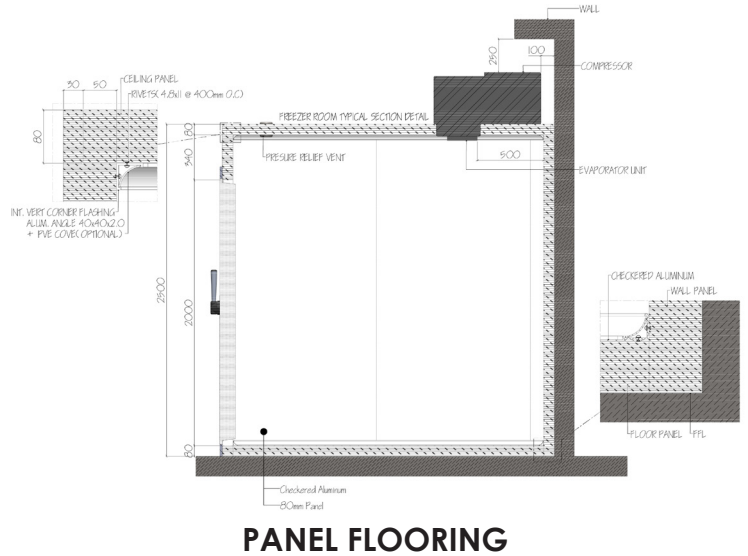
# FREEZER - CHILLER ROOM COLDROOM SPECIFICATIONS

## Construction Of The Room(S):

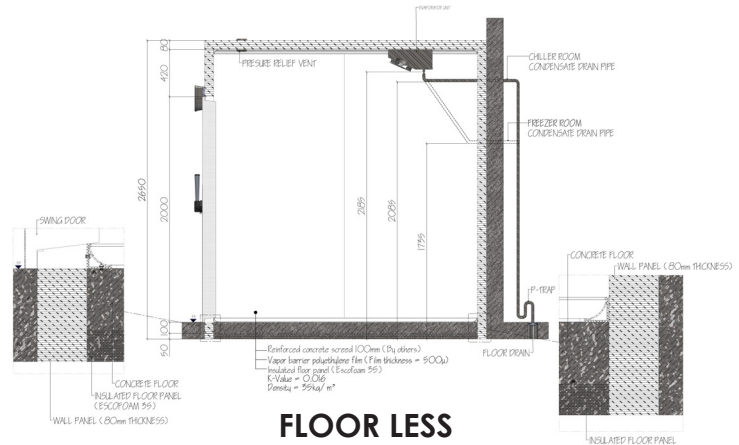
Installation, Commissioning and Engineering are to be supervised by Professional Refrigeration Engineers. Our Engineers are expected to operate the rooms and monitor the cooling to reach expected temperatures. For a Freezer, the expected temperature target is as low as  $-20^{\circ}\text{C}$ . For a Chiller, expected temperature target is as low as  $+1^{\circ}\text{C}$ .

## Room Material Specifications:

- **Insulation:** CFC Free, Rigid Injected Polyurethane Foam.
- **Density:** 42 kg/m<sup>3</sup>.
- **Thickness:** 80mm (+0 temp Rooms), 80mm (-0 temp Rooms)
- **Cladding:** 06 mm P.V.C coating anti-bacterial
- **Fire Rating:** Meets redundancy requirements based on DIN 4102 class B3 and according to ASTM class B3 and ISO 3582.
- **Construction:** Panels are joined together by two systems Male-Female + Cam-Lock.
- **Flooring:** Panel Flooring: 80mm insulated panels with 1.5mm Checkered Aluminum on top  
Floorless: 50mm insulation foam with 100mm concrete slab on the top
- **Doors:** To supply single left/right hinged manual doors with. All fittings including rubber gasket Internal Safety Handles are to be standard white or special order of any suitable color to be specified by the client. Door hinges rise the door body as they open so as not to rub the floor, and fall as they close to insure no thermal leakage and full insulation. As a safety measure the door handles illuminate from inside the room to help worker reach to handle immediately if the door suddenly closes and lights go out. Wall-Ceiling Joints are designed with hygienic monolithic arrangement with no sharp edges to avoid an accumulation of dirt and germs (look above PVC cove and angle).  
o Lighting: Heavy Duty, Water Proof, Low Energy, Florescent Lighting.
- **Lighting:** Heavy Duty, Water Proof, Low Energy, Florescent Lighting T5.
- **Installation:** Panels: Pre-Cut as per site dimensions and client requirements.  
Condensing Units and Evaporators: Pre-Wired to suit site conditions.  
Installation Time: Installation time is from 1 to 2 days, thanks to Pre-Design works.



PANEL FLOORING



FLOOR LESS

## Cooling Material Specifications:

- **Condensing units:** Zanotti remote unit/Zanotti mono block
- **Evaporator:** Zanotti made in Italy
- **Refrigerant:** R-404
- **Electrical Rating:** 380v/3ph (unless otherwise specified)

## Site Requirement:

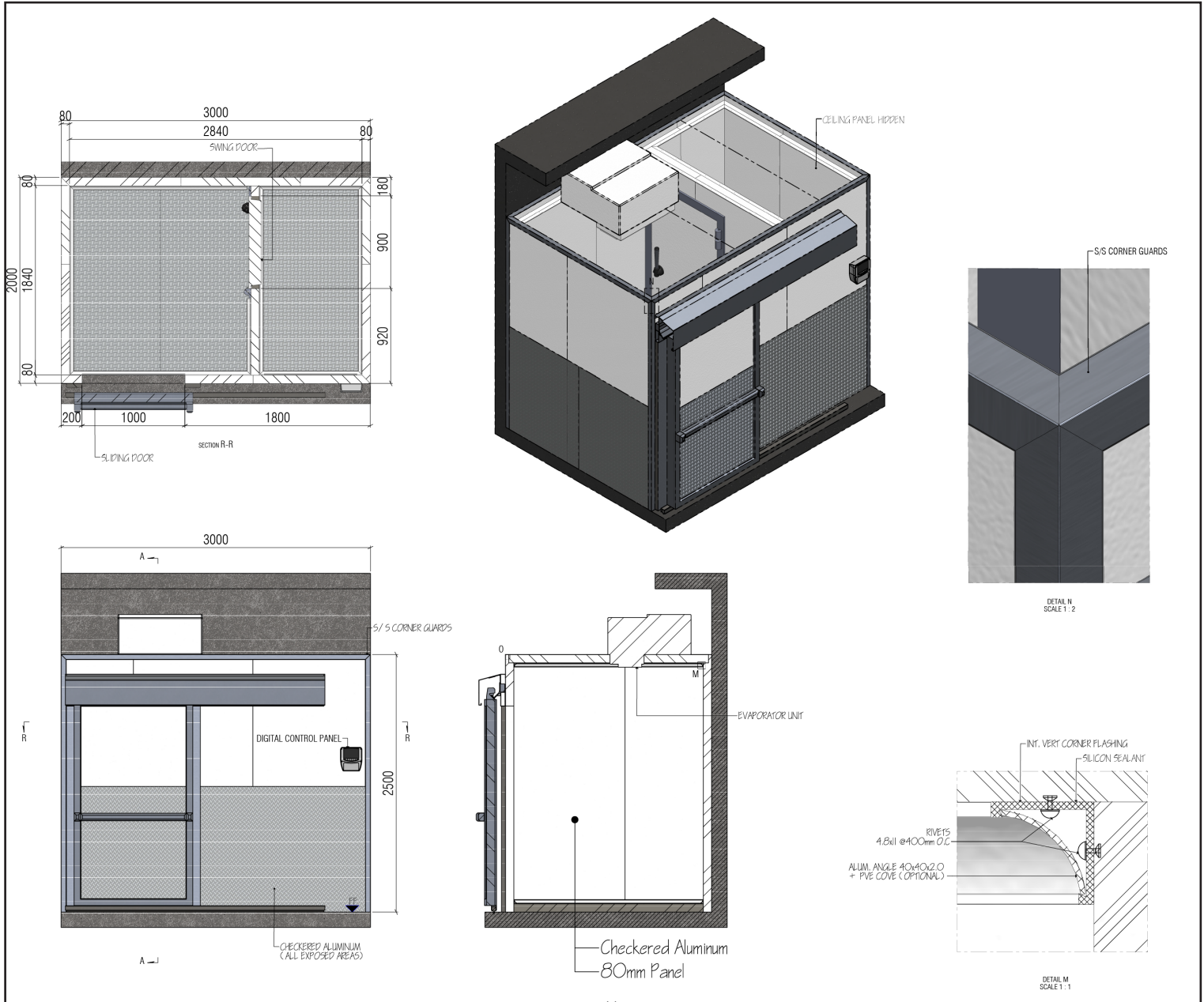
- Separate electrical circuit breakers for each room's condensing unit (CP). The circuit breaker needs to be located as per Raqtan electrical design drawing. o
- Floor and walls need to be perfectly leveled. o
- Condensing unit location must be within 6 meter from evaporator with max 4 meter vertical rise. If need to be higher it must be re-evaluated to cover additional material and CU HP costs. CU stand must be installed as per Raqtan drawing\*\*. If CU location will require a crane, it will be expected that it is located in required location before installation\*\*. o
- All utilities as per Raqtan design to be prepared before installation.



# FREEZER - CHILLER ROOM COLDROOM SPECIFICATIONS

## Engineering and Design:

- Our Engineering and Design Team studies every cold room order separately.
- Every project will have its own Custom Design and Engineering Work with full layout and electro-mechanical details.



For Quotations please contact your nearest regional office or use our 9200 Universal # or email us at [info@raqtan.com](mailto:info@raqtan.com).

**Disclaimer:** The above information is not to be used without the pre-authorization of Raqtan Trading Food Service Equipment Marketing Department. The above is not to be used for design or not to be taken literally. All the information above can be changed at anytime without pre-notification of the user. \*Please note that the above specs are for cold rooms with medium size room (max 5 a side and 4 meter high). Larger rooms will not adhere to this specification sheet and a customized design and engineering works shall be formulated for it.

**\*\*Crane and Stand charges are not included in our pricing.**



# FREEZER - CHILLER ROOM COLDROOM SPECIFICATIONS

## Product Storages Recommendations

PRODUCTS	STORAGE TEMP °C	% RH	STORAGE PERIOD
APPLES	-1 to +1	85 - 90	2-7 M*
APRICOTS	-0.5 to +1.6	78 - 85	1-2 W*
BANANAS	11.7	85	2 W
BEANS, DRIED	0.07	70	6 M
BEEF (FRESH)	1.75	87	3 W
BEEF (FROZEN)	-18 to -20	80 - 85	3-8 M
BUTTER	-10 to -1	75 - 80	6 M
CABBAGE	0 to +1	85 - 90	1-3 M
CARROTS, BUNDLED	0	85 - 90	1-2 W
CAULIFLOWER	0 to +2	85 - 90	2-3 W
CUCUMBERS	+2 to +7	75 - 85	2 W
CHEESE	-1 to +1.5	65 - 75	3-10 M
CHERRIES	+0.5 to +1	80	1-3 W
CHOCOLATE	4.5	75	6 M
DATES	-4.5	75	12 M
EGGS	-1 to -0.5	80 - 85	8 M
FISH (FRESH)	-0.5 to +4	90 - 95	1-2 W
FISH (FROZEN)	-20 to -12	90 - 95	8-10 M
GRAPES	-1 to +3	85 - 90	1-4 M
HONEY	1	75	6 M
ICE CREAM	-30 to -20	85	2-12 W
LAMB (FRESH)	0 to +1	80 - 90	5-10 D
LAMB (FROZEN)	-24 to -12	80 - 90	10 M
LEMONS	+5 to +10	80 - 90	2 M
LETTUCE	0 to +1	85 - 90	1-2 M
LOBSTER	-7	80	1 M
MARGARINE	0.5	80	6 M
MELONS	+2 to +7	80 - 90	1-8 W
MILK	0 to +2	80 - 85	1 W
MUTTON (FRESH)	0	80 - 85	10 D
MUTTON (FROZEN)	-12 to -18	80 - 85	3-8 M
ORANGES	0 to +1.2	85 - 90	8-10 M
PEAS, GREEN	0	80 - 90	1-3 W
PEACHES	-0.5 to +1	80 - 85	2-4 W
PARSLEY	1.5	80	1-2 W
POTATOES	+3 to +6	85 - 90	6 M
POULTRY (FRESH)	0	80	1 W
POULTRY (FROZEN)	-30 to -10	80	3-12 M
TOMATOES, GREEN	+10 to +20	85 - 90	3-4 W
VEGETABLES, FROZEN PACKED	-24 to -18	---	6-12 M

## Sample of our works



Chiller-Freezer Room, Wall-Floor & Ceiling seamless monolithic finish with alarm system system above freezer heated door (optional)



Chiller room, Evaporator installation with ceiling suspension system.



42m long x 12m high ceiling -22C Room, Blower (Evaporator) installation, anti-Freeze LED lamps with back up battery (optional), and heated drains.

## Volume Versus Load Matrix

VLC* MATRIX					
COLD ROOMS			FREEZER ROOMS		
VOLUME (MS)	POWER LOAD (KW)	COMPRESSOR (HP)	VOLUME MS	LOAD KW	COMP HP
0.00	1.30	1.0	0.00	1.50	1.5
10.00	1.30	1.0	10.00	1.50	1.5
20.00	2.00	1.0	20.00	3.00	2.0
30.00	3.00	1.5	30.00	4.00	3.0
40.00	4.00	2.0	40.00	4.50	3.0
50.00	6.00	3.0	50.00	5.50	5.0
100.00	8.00	5.0	100.00	9.00	10.0
150.00	11.00	7.5	150.00	12.00	10.0
200.00	14.00	7.5	200.00	14.40	15.0
250.00	17.00	10.0	250.00	15.00	15.0
300.00	21.00	10.0	300.00	17.40	22.0
350.00	24.00	10.0	350.00	19.00	22.0
400.00	27.00	15.0	400.00	20.00	22.0
450.00	28.00	15.0	450.00	21.40	22.0
500.00	30.00	15.0	500.00	24.00	27.0

\*Volume against Load against Compressor Matrix