

Our R&D focuses on ease of use, and our history of rigorous quality control is unmatched in the industry. As a result, with more than 50 years of experience, Panasonic has sold over 70 million air conditioner units in Japan and around the world.

#### **OPERATING TEST IN** HARSH CONDITIONS





An operating durability test is conducted in a high-temperature, high-humidity test chamber at a temperature of up to 55°C and a low-temperature test chamber down to 20°C.

#### **ENVIRONMENTAL TEST**



An air conditioner is operated in a test room simulating a living room testing cooling speed, cooling efficiency, and temperature and humidity differences throughout

#### NOISE



The operating noise of the indoor and outdoor units is measured in a high-performance anechoic chamber. The noise test verifies that the operating noise is low enough to allow the user to talk and sleep comfortably while the product is operating.

#### WATERPROOF TEST



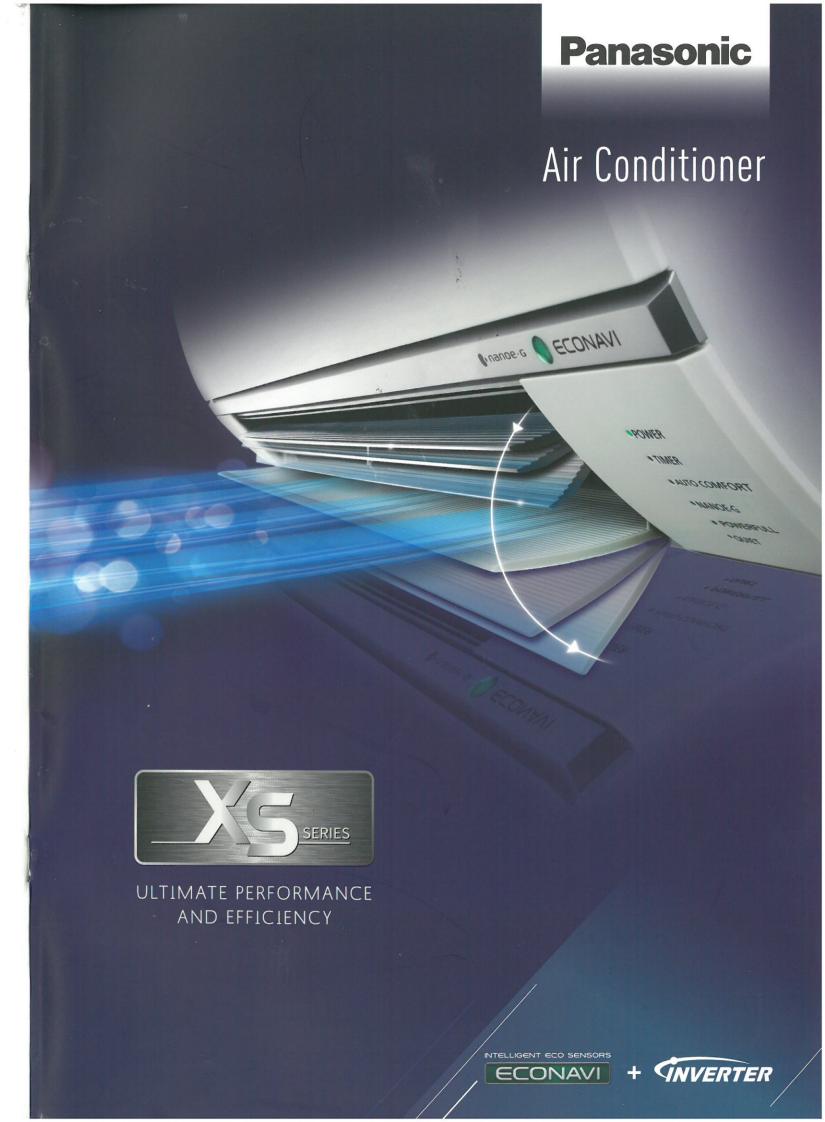


Potential problems are checked by tests such as showering the unit for a predetermined amount of time. Contact sections on printed circuit boards are also resin-potted to prevent adverse effects caused by an unlikely exposure of droplets to

- Please read the Installation Instructions carefully before installing the unit, and the Operating Instructions before using it.
- Specifications are subject to change without prior notice.
   The contents of this catalogue are accurate as of December 2014.
- Due to printing considerations, the actual colours may vary slightly from those shown.
- All graphics are provided merely for the purpose of illustrating a point.



Do not add or replace refrigerant other than the specified type. Manufacturer is not responsible for the damage and deterioration in safety due to usage of other refrigerant.





HOW COOL WOULD IT BE?

POWERING A
GREEN REVOLUTION.

Everyone who imagines what the future could be thinks of a life with better technology. But, it's the simple things that make the world a better place. That is why Panasonic delivers global solutions that improve the quality of life at home and eco-friendly technology that makes the world a better place in the future.

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Reliability Technical Explanation

#### THE RELIABILITY OF A GLOBAL BRAND.

Panasonic is a global leader in air conditioning solutions with 5 decades of experience in the industry. Our products are sold every day in over 120 countries



## HERE FOR YOU TODAY

# THERE

# COOL.ECO.TOGETHER.

INTELLIGENT ECO SENSORS





#### THE PERFECT MATCH FOR HOME LIVING

ECONAVI and INVERTER is a perfect match of energy saving features that keeps air conditioning in your home more efficient and comfortable throughout the day.

#### SAVES YOU MORE ENERGY FOR PEACE OF MIND

Your Panasonic Air Conditioner simply knows when to keep power usage at a minimum. So, you can rest and relax comfortably at home knowing that you save up to 65% energy savings.



\* Please refer to page 06 & 30-33



# ECONAVI AND INVERTER WORK HARD

## TO SAVE ENERGY.

With a Human Activity Sensor and Sunlight Sensor, ECONAVI and INVERTER can monitor human location, movement, absence and sunlight intensity to use energy more efficiently.

### ECONAVI SAVES YOU ENERGY BECAUSE IT KNOWS:



Where you are.



When you leave the room.



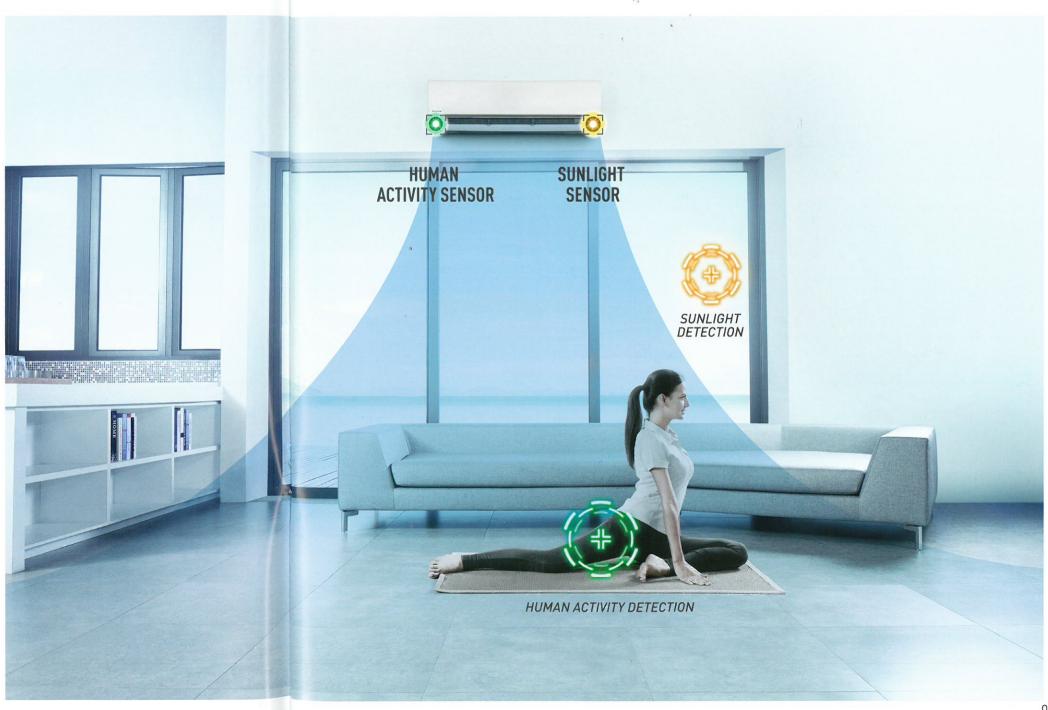
When you are less active.



Whether it's a sunny day or at night.



Adapts rhythmic temperature control after detecting low activity level.





nanoe-g removes PM2.5 particles.

When you think the air looks clean, it may already be polluted with harmful particles less than 2.5 micrometers in size. PM 2.5 comes from motor vehicles, factories and wood burning. Now you can purify the air in your home with nanoe-g.

#### REMOVES 99% OF PM2.5

Thanks to nano-sized ions, nanoe-g can remove particles smaller than 2.5 micrometers (PM2.5) in the air you breathe.

REMOVES 99% AIRBORNE PARTICLES

DEACTIVATES 99% ADHESIVE MICRO-ORGANISMS

#### NEW

Deodorises adhesive odour (tobacco smell).





#### • nanoe-G

# PURIFIES AIR IN YOUR HOME DOWN

# TO THE SMALLEST DETAIL.

nanoe-g releases 3 trillion of fine particles to clean the air in your home environment for fresher and cleaner living.

#### ■ REMOVAL OF AIRBORNE PARTICLES

nanoe-6 can effectively remove up to 99% of PM2.5\*1 and airborne particles\*2 such as bacteria, viruses and mould.

\*1 & \*2 Please refer to page 36 - 39

## DEACTIVATION OF ADHESIVE MICRO-ORGANISMS AND DEODORISATION OF ADHESIVE ODOURS

nanoe-g particles are able to deactivate up to 99%\*3 of bacteria, viruses and inhibit mould growth that settles on surfaces around you. The odours adhered on the curtains and sofa are deodorised.

\*3 Please refer to page 39

#### **3** IN-FILTER DEACTIVATION

With In-Filter Deactivation, nanoe-6 deactivates 99%\*4 of bacteria and viruses trapped inside the filter.

\*4 Please refer to page 40 & 41



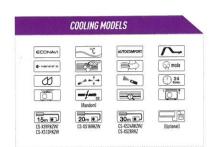












( ): Outdoor Unit

CS-XS9RKZW | CS-XS12RKZW Win

CS-XS18RKZW | CS-XS24RKZW | CS-XS28RKZ



Wireless Wired (Optional)

#### **SPECIFICATIONS**

MODEL		(50Hz)	CS-XS9RKZW (CU-XS9RKZ)	CS-XS12RKZW (cu-xs12rKZ)	CS-XS18RKZW (CU-XS18RKZ)	CS-XS24RKZW (CU-XS24RKZ)	CS-XS28RKZ (CU-XS28RKZ)
		Btu/h	8,530 (2,900-10,900)	11,000 (3,140-13,600)	17,700 (3,750-20,500)	20,500 (3,820-24,200)	23,500 (3,920-29,000)
Cooling Capacity		kW	2.50 (0.85-3.20)	3.23 (0.92-4.00)	5.20 (1.10-6.00)	6.00 (1.12-7.10)	6.90 (1.15-8.50)
		Btu/hW	15.51	14.67	12.92	12.97	11.58
COP		W/W	4.55	4.31	3.80	3.80	3.40
	Voltage	V	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240
Electrical Data	Running Current	А	2.7 - 2.5	3.7 - 3.4	6.3 - 5.9	7.4 - 7.0	9.6 - 9.0
	Power Input	w	550 (200-840)	750 (210-1,000)	1,370 (280-1,620)	1,580 (320-1,980)	2,030 (350-2,700)
		L/h	1.5	1.8	2.9	3.3	3.9
Moisture Removal		Pt/h	3.2	3.8	6.1	7.0	8.2
		m³/min.	11.3	12.6	17.6	18.4	18.4
Air Circulation (Indoor/Hi)		ft³/min.	400	445	620	650	650
	Indoor (H/L/Q-Lo)	(dB-A)	39/26/23 - 39/26/23	40/28/25 - 40/28/25	45/36/33 - 45/36/33	47/37/34 - 47/37/34 *	47/37/34 - 47/37/34
Noise Level	Outdoor (H/L)	(dB-A)	(47) - (48)	(49) - (50)	(49) - (50)	(52) - (53)	(52) - (53)
		mm	296 [542]	296 [619]	296 (695)	296 (795)	296 (795)
	Height	inch	11-21/32 (21-11/32)	11-21/32 (24-3/8)	11-21/32 (27-3/8)	11-21/32 (31-5/16)	11-21/32 (31-5/16)
		mm	870 (780)	870 (824)	1,070 (875)	1,070 (875)	1,070 (875)
Dimensions	Width	inch	34-9/32 (30-23/32)	34-9/32 (32-15/32)	42-5/32 (34-15/32)	42-5/32 (34-15/32)	42-5/32 (34-15/32)
		mm	236 [289]	236 (299)	241 (320)	241 (320)	241 (320)
	Depth	inch	9-5/16 (11-13/32)	9-5/16 (11-25/32)	9-1/2 (12-5/8)	9-1/2 (12-5/8)	9-1/2 (12-5/8)
		kg	9 (31)	9 (32)	12 (44)	12 (56)	12 (57)
Net Weight		lb	20 (68)	20 (71)	26 [97]	26 (123)	26 (126)
	11-1464-	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35 1/4
- C. Carrier D. C. Division Co.	Liquid Side	inch	1/4	1/4	1/4	1/4	0 15.88
Refrigerant Pipe Diameter	Can Cido	mm	ø 9.52	ø 12.70	ø 12.70	ø 15.88	ø 15.88 5/8
	Gas Side	inch	3/8	1/2	1/2	5/8	10
	Chargeless Pipe Length	m	7.5	7.5	10	10	
B	Maximum Pipe Length	m	15	15	20	30	30
Pipe Extension	Maximum Elevation Length	m	5	5	15	20	20 30
	Additional Refrigerant Gas*	g/m	15	15	15	30	Outdoor
Dawer Cupply			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor

Caution For CS-XS9/XS12/XS18/XS24RKZW/XS28RKZ (Important) Please do not use copper pipes that are less than 0.6mm in thickness.

<sup>\*</sup> When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.



Blue Fin

















#### **EASY-TO-USE REMOTE CONTROLLER**

Panasonic's wireless remote controller features a large Liquid Crystal Display (LCD) panel which makes it even more user-friendly. So you can sit back and enjoy easy operation and long-lasting comfort from your Panasonic Air Conditioner.

- LCD display for an easy overview of the operation status.
- ECONAVI monitors sunlight intensity, human movement, activity levels and human absence to detect and reduce energy waste.
- Auto comfort mode detects high activity levels and switches to comfort operation for maximum comfort.
- Activates the nanoe-g function even when the air conditioner is switched off.
- 6 Press up or down to set the temperature.
- Toggles between COOL and DRY setting mode.
- Set the airflow.
- Adjusts the fan spee
- Quiet function allows you to sleep comfortably at night.
- Set the 24-hour ON & OFF Timer or 24-hour Dual ON & OFF Timer.
- Set the actual time (hour and minute).



Wireless Applicable to DELUXE Inverter

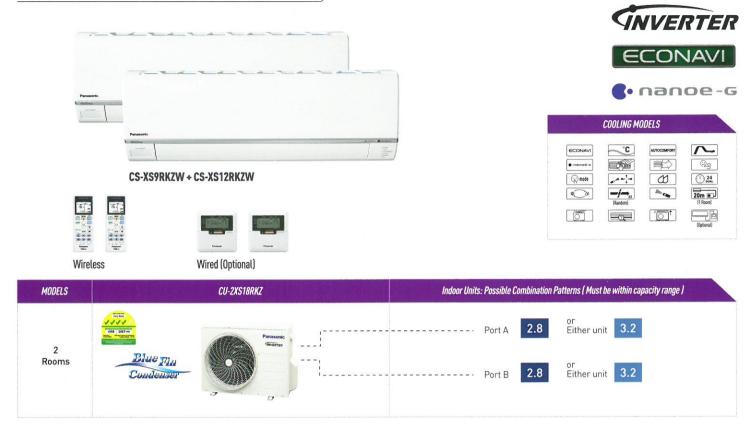
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#### **DUAL TIMER**



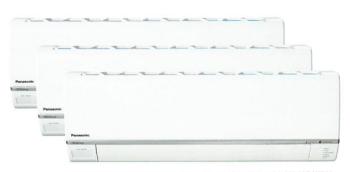
Select ON or OFF Timer  ON  O1  Cancel  Set the time.	OFF ⊕ 1 → ⊕	2→Cancel
⊕ 01 → 02 → Cancel		2→Cancel
	2	2 → Cancel
Set the time.	2	
Confirm.	NIZ.	

#### DELUXE INVERTER DUAL-SPLIT MODEL



<sup>•</sup> It is possible to have a combination of wall-mounted models (CS-XS9, XS12RKZW) for the (CU-2XS18RKZ) Outdoor Unit Ports.

#### DELUXE INVERTER TRIPLE-SPLIT MODEL



CS-XS9RKZW + CS-XS12RKZW + CS-XS15RKZW + CS-XS18RKZW



MODELS	CU-3XS27RKZ	Indoor Units: Possible Combination Patterns ( Must be within capacity range )
	733 774-m	Port A 2.8 or 3.2 or 4.0 or 5.0
3 Rooms	Blue Fin	Port B 2.8 or 3.2 or 4.0 or 5.0
	Condeuser	Port C 2.8 or 3.2 or 4.0 or 5.0

<sup>•</sup> It is possible to have a combination of wall-mounted models (CS-XS9, XS12, XS15, XS18RKZW) for the (CU-3XS27RKZ) Outdoor Unit Ports.

#### SPECIFICATIONS - INDOOR

			DUAL-SPLI	T MODEL
MODEL		(50Hz)	CS-XS7RKZW	CS-XS12RKZW
Operation			1-Unit	1-Unit
Cooling Capacity		Btu/h (Min ~ Max)	9,550 (3,750 ~ 11,900)	10,900 (3,750 ~ 13,600)
cooting capacity		kW (Min ~ Max)	2.80 (1.10 ~ 3.50)	3.20 (1.10 ~ 4.00)
COP		Btu/hW	12.73	11.87
COI		W/W	3.73	3.48
Electrical Data	Voltage	V	220 - 240	220 - 240
Electrical Data	Running Current	А	3.70 - 3.40	4.50 - 4.20
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	41 / 29	44 / 32
Moisture Removal		L/h	1.6	1.8
	1 (12)	m³/min.	11.2	12.6
Air Circulation (Inc	door/HI)	ft³/min.	395	445
Fan Output		w	40	40
	Height	mm	296	296
Dimensions	Width	mm	870	870
	Depth	mm	236	236
Net Weight Indoor		kg	9	9
Refrigerant	Liquid Side	mm	ø 6.35	ø 6.35
Pipe Diameter	Gas Side	mm	ø 9.52	ø 9.52
Pipe Extension	Standard Pipe Length	m	7.5	7.5
Power Supply			Outdoor	Outdoor

#### SPECIFICATIONS - INDOOR

INVERTER

ECONAVI

• nanoe-g

AUTOCOMPORT

Signature

Control

(in Reen)

COOLING MODELS

(Random)

				TRIPLE-SPLI	T MODEL	
MODEL		(50Hz)	CS-XS9RKZW	CS-XS12RKZW	CS-XS15RKZW	CS-XS18RKZW
Operation			1-Unit	1-Unit	1-Unit	1-Unit
Cooling Capacity		Btu/h (Min ~ Max) kW (Min ~ Max)	9,550 (5,800 ~ 11,600) 2.80 (1,70 ~ 3,40)	10,900 (5,800 ~ 13,600) 3.20 (1,70 ~ 4,00)	13,600 (5,800 ~ 16,400) 4.00 (1.70 ~ 4.80)	17,100 (6,480 ~ 19,800) 5.00 (1.90 ~ 5.80)
		Btu/hW	13.65	13.65	11.57	11.67
COP		W/W	4.00	4.00	3.39	3.42
	Voltage	٧	220 - 240	220 - 240	220 - 240	220 - 240
Electrical Data	Running Current	А	3.80 - 3.50	4.30 - 3.90	6.10 - 5.60	7.40 - 6.80
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	41 / 29	44 / 32	45 / 32	47 / 38
Moisture Removal		L/h	1.6	1.8	2.3	2.7
Air Circulation (Inc	door/Hi)	m³/min. ft³/min.	11.2 395	12.6 445	13.3 470	17.6 620
Fan Output		w	40	40	40	40
11	Height	mm	296	296	296	296
Dimensions	Width	mm	870	870	870	1,070
	Depth	mm	236	236	236	241
Net Weight Indoor	•	kg	9	9	9	12
Refrigerant	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35
Pipe Diameter	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52	ø 9.52
Pipe Extension	Standard Pipe Length	m	7.5	7.5	7.5	10.0
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor

#### SPECIFICATIONS - OUTDOOR

			DUAL-SPLIT MODEL	TRIPLE-SPLIT MODEL
MODEL		(50Hz)	CU-2XS18RKZ	CU-3XS27RKZ
Cooling Capacity		Btu/h (Min ~ Max)	17,100 [5,120~20,500] 5.00	20,500 (9,550 – 27,300) 6.00
		kW (Min ~ Max)	(1.50 ~ 6.00)	(2.80 ~ 8.00)
COP		Btu/hW	15.21	15.14
COP		W/W	4.46	4.44
Weighted COP		w/w	5.07	4.83
	Voltage	V	220 - 240	220 - 240
Electrical Data	Running Current	А	5.20 - 4.80	6.90 - 6.30
Power Input		W (Min ~ Max)	1,120 (250 ~ 1,700)	1,350 (520 ~ 2,570)
Sound Pressure Level	Outdoor (Hi/Lo)	(dB-A)	51	51
Maximum Current		А	12	15.2
Starting Current		А	5.2	6.9
Compressor Output	t	w	900	1,300
Fan Output		w	40	44
	Height	mm	619	695
Dimensions	Width	mm	824 (+70)	875 (+95)
	Depth	mm	299	320
Net Weight Indoor		kg	38	58
	Chargeless Pipe Length	m	20	30
	Maximum Pipe Length	1 Room	20	25
Pipe Extension**	Maximum ripe Length	Total	30	60
	Maximum Elevation Length	m	10	15
	Additional Refrigerant Gas*	g/m	15	20

<sup>\*</sup> When pipes are not extended from the standard pipe length, the required amount of refrigerant is already in the unit.

#### INVERTER DUAL-SPLIT MODEL (CU-2XS18RKZ)

INDOOR UNIT CO	DAGUIATION			COOLING C	APACITY (kW)		POW	/ER INPUT (W)	CURRENT	(A) (50Hz)	MOISTURE
INDUUK UNII CO	JMBINATIUN	TOTAL	A	В	TOTAL	MIN - MAX	RATED	MIN ~ MAX	220V	240V	MOISTURE REMOVAL L/H
1 Dans	2.8	2.8	2.80	_	2.80	1,10 ~ 3.50	750	220 ~ 1,000	3.65	3.40	1.6
1 Room	3.2	3.2	3.20	_	3.20	1.10 ~ 4.00	920	220 ~ 1,220	4.50	4.20	1.8
	2.8 + 2.8	5.6	2.40	2.40	4.80	1.50 ~ 5.80	1,100	250 ~ 1,640	5.20	4.80	1.5 + 1.5
2 Rooms	2.8 + 3.2	6.0	2.30	2.70	5.00	1.50 ~ 5.90	1,140	250 ~ 1,670	5.30	4.80	1.5 + 1.6
	3.2 + 3.2	6.4	2.50	2.50	5.00	1.50 ~ 6.00	1,120	250 ~ 1,700	5.20	4.80	1.5 + 1.5

#### INVERTER TRIPLE-SPLIT MODEL (CU-3XS27RKZ)

			BRAN		COOLING CAPACI	TY (kW)		POV	VER INPUT (W)	CURRENT	(A) (50Hz)	MOISTURE
INDUUR UNII	COMBINATION	TOTAL	A	В	C	TOTAL	MIN - MAX	RATED	MIN - MAX	220V	240V	MOISTURE REMOVAL L/H
	2.8	2.8	2.80			2.80	1.70 ~ 3.40	700	380 ~ 890	3.8	3.5	1.6
1 Room	3.2	3.2	3.20			3.20	1.70 ~ 4.00	800	380 ~ 1,200	4.3	3.9	1.8
I KOOIII	4.0	4.0	4.00			4.00	1.70 ~ 4.80	1,180	380 ~ 1,480	6.1	5.6	2.3
	5.0	5.0	5.00			5.00	1.90 ~ 5.80	1,460	400 ~ 1,890	7.4	6.8	2.7
	2.8 + 2.8	5.6	2.80	2.80		5.60	1.70 ~ 6.40	1,750	420 ~ 2,530	8.7	8.0	1.6 + 1.6
	2.8 + 3.2	6.0	2.80	3.20		6.00	1.70 ~ 6.50	2,020	420 ~ 2,530	10.1	9.2	1.6 + 1.8
	2.8 + 4.0	6.8	2.47	3.53		6.00	2.50 ~ 7.30	1,820	550 ~ 3,230	9.1	8.3	1.5 + 2.0
	2.8 + 5.0	7.8	2.15	3.85		6.00	2.70 ~ 7.70	1,630	530 ~ 3,220	8.2	7.5	1.4 + 2.3
٥ ٥	3.2 + 3.2	6.4	3.00	3.00		6.00	2.30 ~ 7.10	1,970	570 ~ 3,250	9.8	9.0	1.7 + 1.7
2 Rooms	3.2 + 4.0	7.2	2.67	3.33		6.00	2.50 ~ 7.40	1,820	550 ~ 3,230	9.1	8.3	1.6 + 1.9
	3.2 + 5.0	8.2	2.34	3.66		6.00	2.80 ~ 7.70	1,630	530 ~ 3,220	8.2	7.5	1.5 + 2.1
	4.0 + 4.0	8.0	3.00	3.00		6.00	2.70 ~ 7.60	1,680	540 ~ 3,220	8.4	7.7	1.7 + 1.7
	4.0 + 5.0	9.0	2.67	3.33		6.00	2.80 ~ 7.80	1,540	530 ~ 3,210	7.8	7.1	1.6 + 1.9
	5.0 + 5.0	10.0	3.00	3.00		6.00	2.90 ~ 8.00	1,500	520 ~ 3,210	7.6	6.9	1.7 + 1.7
	2.8 + 2.8 + 2.8	8.4	2.00	2.00	2.00	6.00	2.40 ~ 7.60	1,500	580 ~ 3,080	7.6	6.9	1.3 + 1.3 + 1
	2.8 + 2.8 + 3.2	8.8	1.91	1.91	2.18	6.00	2.40 ~ 7.70	1,460	580 ~ 3,080	7.4	6.8	1.2 + 1.2 + 1
	2.8 + 2.8 + 4.0	9.6	1.75	1.75	2.50	6.00	2.60 ~ 8.00	1,460	600 ~ 3,170	7.4	6.8	1.1 + 1.1 + 1
	2.8 + 2.8 + 5.0	10.6	1.58	1.58	2.84	6.00	2.80 ~ 8.00	1,450	600 ~ 2,830	7.3	6.7	1.0 + 1.0 + 1
	2.8 + 3.2 + 3.2	9.2	1.82	2.09	2.09	6.00	2.40 ~ 7.70	1,460	580 ~ 3,090	7.4	6.8	1.2 + 1.4 + 1
	2.8 + 3.2 + 4.0	10.0	1.68	1.92	2.40	6.00	2.60 ~ 8.00	1,470	600 ~ 3,110	7.4	6.8	1.1 + 1.2 + 1
	<sup>4</sup> 2.8 + 3.2 + 5.0	11.0	1.52	1.75	2.73	6.00	2.80 ~ 8.00	1,420	600 ~ 2,830	7.2	6.6	1.0 + 1.1 + 1
	2.8 + 4.0 + 4.0	10.8	1.56	2.22	2.22	6.00	2.70 ~ 8.00	1,450	600 ~ 2,930	7.3	6.7	1.0 + 1.4 + 1
	2.8 + 4.0 + 5.0	11.8	1.42	2.03	2.55	6.00	2.80 ~ 8.00	1,420	580 ~ 2,680	7.2	6.6	0.9 + 1.3 + 1
3 Rooms	2.8 + 5.0 + 5.0	12.8	1.32	2.34	2.34	6.00	2.80 ~ 8.00	1,350	520 ~ 2,570	6.9	6.3	0.8 + 1.5 + 1
	3.2 + 3.2 + 3.2	9.6	2.00	2.00	2.00	6.00	2.40 ~ 7.70	1,470	590 ~ 3,100	7.4	6.8	1.3 + 1.3 + 1
	3.2 + 3.2 + 4.0	10.4	1.85	1.85	2.30	6.00	2.60 ~ 8.00	1,470	600 ~ 3,120	7.4	6.8	1.2 + 1.2 + 1
	3.2 + 3.2 + 5.0	11.4	1.68	1.68	2.64	6.00	2.80 ~ 8.00	1,420	600 ~ 2,830	7.2	6.6	1.1 + 1.1 + 1
	3.2 + 4.0 + 4.0	11.2	1.72	2.14	2.14	6.00	2.80 ~ 8.00	1,450	600 ~ 2,880	7.3	6.7	1.1 + 1.4 + 1
	3.2 + 4.0 + 5.0	12.2	1.57	1.97	2.46	6.00	2.80 ~ 8.00	1,410	580 ~ 2,680	7.1	6.5	1.0 + 1.3 + 1
	3.2 + 5.0 + 5.0	13.2	1.46	2.27	2.27	6.00	2.80 ~ 8.00	1,350	520 ~ 2,570	6.9	6.3	0.9 + 1.5 + 1
	4.0 + 4.0 + 4.0	12.0	2.00	2.00	2.00	6.00	2.80 ~ 8.00	1,420	590 ~ 2,730	7.2	6.6	1.3 + 1.3 + 1
	4.0 + 4.0 + 5.0	13.0	1.85	1.85	2.30	6.00	2.80 ~ 8.00	1,360	540 ~ 2,580	6.9	6.4	1.2 + 1.2 + 1

Specification based on ISO 15042 standa

A minimum of 2 indoor units must be connected.

witchable between 8.5amp or 11amp

#### WALL-MOUNTED

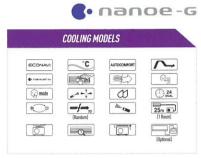


ECONAVI





Wired (Optional)



CS-XS9RKZW | CS-XS12RKZW | CS-XS15RKZW CS-XS18RKZW | CS-XS24RKZW

Wireless

	MODELS*		Indoor Units: Possible Combination Patterns ( Must be within capacity range )
3 Rooms	CU-3XS28RBZ  Parasonic  Trective  Consideration		Port A 2.8 or 3.2 or 4.0 or 5.0 or 6.0
	CU-4XS32RBZ		Port B 2.8 or 3.2 or 4.0 or 5.0 or 6.0
4 Rooms	Total STEP Condenses	1	Port C 2.8 or 3.2 or 4.0 or 5.0 or 6.0

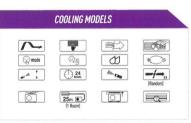
- It is possible to have a combination of wall-mounted models [CS-XS9, XS12, XS15, XS18, XS24RKZW], mini cassette models [CS-S12, S18, S24MB4ZW] and ducted models [CS-E12QD3EAW, ME18PD3EA] for the [CU-3XS28RBZ, 4XS32RBZ] Outdoor Unit Ports.
- A minimum of 2 indoor units must be connected.

#### MINI CASSETTE









INVERTER

CS-S12MB4ZW | CS-S18MB4ZW CS-S24MB4ZW

Panel CZ-BT20E

	MODE	LS	Indoor Units: Possible Combination Patterns ( Must be within capacity range )
3 Rooms	CU-3XS28RBZ  Blue Tida  Conscioused	Panasonic Triumes	Port A 2.8 or 3.2 or 4.0 or 5.0 or 6.0
	CU-4XS32RBZ		Port B 2.8 or 3.2 or 4.0 or 5.0 or 6.0
4 Rooms	Blue That	Financia Giórge	Port C 2.8 or 3.2 or 4.0 or 5.0 or 6.0

• It is possible to have a combination of wall-mounted models [CS-XS9, XS12, XS15, XS18, XS24RKZW], mini cassette models [CS-S12, S18, S24MB4ZW] and ducted models [CS-E120D3EAW, ME18PD3EA] for the [CU-3XS28RBZ, 4XS32RBZ] Outdoor Unit Ports.

SPECIFICATIONS - INDOOR

					WALL-MOUNTED		
MODEL		(50Hz)	CS-XS9RKZW	CS-XS12RKZW	CS-XS15RKZW	CS-XS18RKZW	CS-XS24RKZW
Operation			1-Unit	1-Unit	1-Unit	1-Unit	1-Unit
Cooling Conneity	*	Btu/h (Min ~ Max)	9,550 (5,800 ~ 11,600)	10,900 (5,800 ~ 13,600)	13,600 (5,800 ~ 16,400)	17,100 (6,480 ~ 19,800)	20,500 [6,480 ~ 21,100]
Cooling Capacity		kW (Min ~ Max)	2.80 {1,70 ~ 3.40}	3.20 (1.70 ~ 4.00)	4.00 (1.70 ~ 4.80)	5.00 (1.90 ~ 5.80)	6.00 (1.90 ~ 6.20)
000		Btu/hW	13.65	13.65	11.57	11.67	10.67
COP		W/W	4.00	4.00	3.39	3.42	3.13
	Voltage	٧	220 - 240	220 - 240	220 - 240	220 - 240	220 - 240
Electrical Data	Running Current	А	3.70 - 3.40	4.20 - 3.90	6.00 - 5.50	7.30 - 6.70	9.30 - 8.60
ound Pressure evel	Indoor (Hi/Lo)	(dB-A)	41 / 29	44/32	45 / 32	47 / 38	48 / 39
Moisture Removal		L/h	1.6	1.8	2.3	2.7	3.3
ir Circulation (Inc	Jan = /(1):)	m³/min.	11.2	12.6	13.3	17.6	17.9
air Circulation (inc	100F/HI)	ft³/min.	395	445	470	620	630
an Output		W	40	40	40	40	40
	Height	mm	1 296	296	296	296	296
imensions	Width	mm	870	870	870	1,070	1,070
	Depth	mm	236	236	236	241	241
let Weight Indoor		kg	9	9	9	12	12
Refrigerant	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35	ø 6.35	ø 6.35
Pipe Diameter	Gas Side	mm	ø 9.52	ø 9.52	ø 9.52	ø 9.52	ø 12.70
Pipe Extension	Standard Pipe Length	m	7.5	7.5	7.5	7.5	7.5
Power Supply			Outdoor	Outdoor	Outdoor	Outdoor	Outdoor

#### SPECIFICATIONS - INDOOR

4				MINI CASSETTE	
MODEL		(50Hz)	CS-S12MB4ZW	CS-S18MB4ZW	CS-S24MB4ZW
Operation ,			1-Unit	1-Unit	1-Unit
Cooling Capacity		Btu/h (Min ~ Max)	10,900 (5,800 ~ 13,600)	17,100 (6,480 ~ 19,800)	20,500 (6,480 ~ 21,100)
Cooling Capacity		kW (Min ~ Max)	3.20 [1,70 ~ 4.00]	5.00 (1.90 ~ 5.80)	6.00 (1.90 ~ 6.20)
COP		Btu/hW	13.65	11.67	10.67
COF		W/W	4.00	3.42	3.13
Electrical Data	Voltage	V	220 - 240	220 - 240	220 - 240
Electrical Data	Running Current	А	4.20 - 3.90	7.30 - 6.70	9.30 - 8.60
Sound Pressure Level	Indoor (Hi/Lo)	(dB-A)	34 / 26	36 / 28	41 / 33
Moisture Remova	al	L/h	1.8	2.7	3.3
Air Circulation (Ir	- d /(U:)	m³/min.	10.5	11.0	12.8
Air Circulation (if	ndoor/HIJ	ft³/min.	370	390	450
Fan Output		w	40	40	40
	Height	mm	260	260	260
Dimensions	Width	mm	575	575	575
	Depth	mm	575	575	575
Net Weight Indoo	ır	kg	18	18	18
Refrigerant	Liquid Side	mm	ø 6.35	ø 6.35	ø 6.35
Pipe Diameter	Gas Side	mm	ø 9.52	ø 9.52	ø 12.70
Pipe Extension	Standard Pipe Length	m	7.5	7.5	7.5
Power Supply			Outdoor	Outdoor	Outdoor

#### SPECIFICATIONS - OUTDOOR

MODEL		(50Hz)	CU-3XS28RBZ	CU-4XS32RBZ
Cooling Capacity		Btu/h (Min ~ Max)	22,200 (9,550 ~ 30,700)	27,300 (9,890 ~ 35,800)
cooting capacity		kW (Min ~ Max)	6.50 (2.80 ~ 9.00)	8.00 (2.90 ~ 10.50)
COP		Btu/hW	15.07	15.75
COP		w/w	4.42	4.62
Weighted COP		w/w	4.75	5.09
	Voltage	V	220 - 240	220 - 240
Electrical Data	Running Current	А	7.30 - 6.70	8.60 - 7.90
	Power Input	(Min ~ Max)	1,470 (520 ~ 2,750)	1,730 (560 ~ 2,770)
Sound Pressure Level	Outdoor (Hi/Lo)	(dB-A)	51	52
Maximum Current		А	15.2	19.0
Starting Current		А	7.3	8.6
Compressor Outpu	it	w	1,300	1,700
Fan Output		w	60	90
	Height	mm	795	999
Dimensions	Width	mm	875 (+95)	940
	Depth	mm	320	340
Net Weight Indoor		kg	69	76
	Chargeless Pipe Length	m	30	45
	Mariana Dia Lauri	1 Room	25	25
Pipe Extension*	Maximum Pipe Length	Total	60	70
•	Maximum Elevation Length	m	15	15
	Additional Refrigerant Gas*	g/m	20	20

#### INVERTER MULTI-COMBINATION (CU-3XS27RKZ)

INDOOR UNIT C	OMRINATION		STEW DIE	TO EST	COOLING CAPAC	CONTRACTOR OF STREET			IWER INPUT (W)	CURRENT (A)	MOISTURE REMOVAL L/H
INDUCTION ONLY C		TOTAL	A	В	C	TOTAL	MIN - MAX	RATED	MIN - MAX	240V / 50Hz	
	2.8	2.8	2.80			2.80	1.70 ~ 3.40	700	380 ~ 890	3.4	1.6
1 Room	3.2	3.2	3.20			3.20	1.70 ~ 4.00	800	380 ~ 1,200	3.9	1.8
	4.0	4.0	4.00			4.00	1.70 ~ 4.80	1,180	380 ~ 1,480	5.5	2.3
	5.0	5.0	5.00			5.00	1.90 ~ 5.80	1,460	400 ~ 1,890	6.7	2.7
	2.8 + 2.8	5.6	2.80	2.80		5.60	1.70 ~ 6.40	1,750	420 ~ 2,530	8.0	1.6 + 1.6
	2.8 + 3.2	6.0	2.80	3.20		6.00	1.70 ~ 6.50	2,020	420 ~ 2,530	9.2	1.6 + 1.8
	2.8 + 4.0	6.8	2.47	3.53		6.00	2.50 ~ 7.30	1,820	550 ~ 3,230	8.3	1.5 + 2.0
	2.8 + 5.0	7.8	2.15	3.85		6.00	2.70 ~ 7.70	1,630	530 ~ 3,220	7.5	1.4 + 2.3
2 Rooms	3.2 + 3.2	6.4	3.00	3.00		6.00	2.30 ~ 7.10	1,970	570 ~ 3,250	9.0	1.7 + 1.7
Z ROUITS	3.2 + 4.0	7.2	2.67	3.33		6.00	2.50 ~ 7.40	1,820	550 ~ 3,230	8.3	1.6 + 1.9
	3.2 + 5.0	8.2	2.34	3.66		6.00	2.80 ~ 7.70	1,630	530 ~ 3,220	7.5	1.5 + 2.1
	4.0 + 4.0	8.0	3.00	3.00		6.00	2.70 ~ 7.60	1,680	540 ~ 3,220	7.7	1.7 + 1.7
	4.0 + 5.0	9.0	2.67	3.33		6.00	2.80 ~ 7.80	1,540	530 ~ 3,210	7.1	1.6 + 1.9
	5.0 + 5.0	10.0	3.00	3.00		6.00	2.90 ~ 8.00	1,500	520 ~ 3,210	6.9	1.7 + 1.7
	2.8 + 2.8 + 2.8	8.4	2.00	2.00	2.00	6.00	2.40 ~ 7.60	1,500	580 ~ 3,080	6.9	1.3 + 1.3 + 1.3
	2.8 + 2.8 + 3.2	8.8	1.91	1.91	^ 2.18	6.00	2.40 ~ 7.70	1,460	580 ~ 3,080	6.8	1.2 + 1.2 + 1.4
	2.8 + 2.8 + 4.0	9.6	1.75	1.75	2.50	6.00	2.60 ~ 8.00	1,460	600 ~ 3,170	6.8	1.1 + 1.1 + 1.5
	2.8 + 2.8 + 5.0	10.6	1.58	1.58	2.84	6.00	2.80 ~ 8.00	1,450	600 ~ 2,830	6.7	1.0 + 1.0 + 1.7
	2.8 + 3.2 + 3.2	9.2	1.82	2.09	2.09	6.00	2.40 ~ 7.70	1,460	580 ~ 3,090	6.8	1.2 + 1.4 + 1.4
	2.8 + 3.2 + 4.0	10.0	1.68	1.92	2.40	6.00	2.60 ~ 8.00	1,470	600 ~ 3,110	6.8	1.1 + 1.2 + 1.5
	2.8 + 3.2 + 5.0	11.0	1.52	1.75	2.73	6.00	2.80 ~ 8.00	1,420	600 ~ 2,830	6.6	1.0 + 1.1 + 1.6
	2.8 + 4.0 + 4.0	10.8	1.56	2.22	2.22	6.00	2.70 ~ 8.00	1,450	600 ~ 2,930	6.7	1.0 + 1.4 + 1.4
0 D	2.8 + 4.0 + 5.0	11.8	1.42	2.03	2.55	6.00	2.80 ~ 8.00	1,420	580 ~ 2,680	6.6	0.9 + 1.3 + 1.6
3 Rooms	2.8 + 5.0 + 5.0	12.8	1.32	2.34	2.34	6.00	2.80 ~ 8.00	1,350	520 ~ 2,570	6.3	0.8 + 1.5 + 1.5
	3.2 + 3.2 + 3.2	9.6	2.00	2.00	2.00	6.00	2.40 ~ 7.70	1,470	590 ~ 3,100	6.8	1.3 + 1.3 + 1.3
	3.2 + 3.2 + 4.0	10.4	1.85	1.85	2.30	6.00	2.60 ~ 8.00	1,470	600 ~ 3,120	6.8	1.2 + 1.2 + 1.5
	3.2 + 3.2 + 5.0	11.4	1.68	1.68	2.64	6.00	2.80 ~ 8.00	1,420	600 ~ 2,830	6.6	1.1 + 1.1 + 1.6
	3.2 + 4.0 + 4.0	11.2	1.72	2.14	2.14	6.00	2.80 ~ 8.00	1,450	600 ~ 2,880	6.7	1.1 + 1.4 + 1.4
	3.2 + 4.0 + 5.0	12.2	1.57	1.97	2.46	6.00	2.80 ~ 8.00	1,410	580 ~ 2,680	6.5	1.0 + 1.3 + 1.5
	3.2 + 5.0 + 5.0	13.2	1.46	2.27	2.27	6.00	2.80 ~ 8.00	1,350	520 ~ 2,570	6.3	0.9 + 1.5 + 1.5
	4.0 + 4.0 + 4.0	12.0	2.00	2.00	2.00	6.00	2.80 ~ 8.00	1,420	590 ~ 2,730	6.6	1.3 + 1.3 + 1.3
	4.0 + 4.0 + 5.0	13.0	1.85	1.85	2.30	6.00	2.80 ~ 8.00	1,360	540 ~ 2,580	6.4	1.2 + 1.2 + 1.5

Specification based on ISO 15042 standard.
 A minimum of 2 indoor units must be connected.

#### INVERTER MULTI-COMBINATION (CU-3XS28RBZ)

INDOOR UNIT COMBINATION					COOLING CAPACIT				WER INPUT (W)	CURRENT (A)	MOISTURE REMOVAL L/H
mboon on it do		TOTAL	A	В	C	TOTAL	MIN - MAX	RATED	MIN - MAX	240V / 50Hz	
	2.8	2.8	2.80			2.80	1.70 ~ 3.40	700	380 ~ 890	3.4	1.6
	3.2	3.2	3.20			3.20	1.70 ~ 4.00	800	380 ~ 1,200	3.9	1.8
1 Room	4.0	4.0	4.00			4.00	1.70 ~ 4.80	1,180	380 ~ 1,480	5.5	2.3
	5.0	5.0	5.00			5.00	1.90 ~ 5.80	1,460	400 ~ 1,890	6.7	2.7
	6.0	6.0	6.00			6.00	1.90 ~ 6.20	1,920	400 ~ 2,070	8.6	3.3
	2.8 + 2.8	5.6	2.80	2.80		5.60	1.70 ~ 6.70	1,660	420 ~ 2,270	7.5	1.6 + 1.6
	2.8 + 3.2	6.0	2.80	3.20		6.00	1.70 ~ 6.70	1,910	420 ~ 2,270	8.7	1.6 + 1.8
	2.8 + 4.0	6.8	2.68	3.82		6.50	2.50 ~ 7.60	2,030	550 ~ 2,900	9.1	1.6 + 2.2
	2.8 + 5.0	7.8	2.33	4.17		6.50	2.70 ~ 8.00	1,840	530 ~ 2,890	8.3	1.5 + 2.4
	2.8 + 6.0	8.8	2.07	4.43		6.50	2.70 ~ 8.00	1,840	530 ~ 2,890	8.3	1.3 + 2.5
2 Rooms	3.2 + 3.2	6.4	3.20	3.20		6.40	2.30 ~ 7.40	2,180	570 ~ 2,920	9.8	1.8 + 1.8
	3.2 + 4.0	7.2	2.89	3.61		6.50	2.50 ~ 7.70	2,030	550 ~ 2,900	9.1	1.7 + 2.1
	3.2 + 5.0	8.2	2.54	3.96		6.50	2.80 ~ 8.00	1,840	530 ~ 2,880	8.3	1.6 + 2.3
	3.2 + 6.0	9.2	2.26	4.24		6.50	2.80 ~ 8.00	1,840	530 ~ 2,880	8.3	1.5 + 2.4
	4.0 + 4.0	8.0	3.25	3.25		6.50	2.70 ~ 7.90	1,880	540 ~ 2,890	8.5	1.8 + 1.8
	4.0 + 5.0	9.0	2.89	3.61		6.50	2.80 ~ 8.10	1,750	530 ~ 2,880	7.9	1.7 + 2.1
	4.0 + 6.0	10.0	2.60	3.90		6.50	2.80 ~ 8.10	1,750	530 ~ 2,880	7.9	1.6 + 2.3
	5.0 + 5.0	10.0	3.25	3.25		6.50	2.90 ~ 8.30	1,660	520 ~ 2,880	7.5	1.8 + 1.8
	5.0 + 6.0	11.0	2.95	3.55		6.50	2.90 ~ 8.30	1,660	520 ~ 2,880	7.5	1.7 + 2.1
	6.0 + 6.0	12.0	3.25	3.25		6.50	2.90 ~ 8.30	1,660	520 ~ 2,880	7.5	1.8 + 1.8
	2.8 + 2.8 + 2.8	8.4	2.16	2.16	2.16	6.48	2.40 ~ 7.90	1,610	580 ~ 2,760	7.3	1.4 + 1.4 + 1.
	2.8 + 2.8 + 3.2	8.8	2.07	2.07	2.36	6.50	2.40 ~ 8.00	1,570	580 ~ 2,770	7.2	1.3 + 1.3 + 1.
	2.8 + 2.8 + 4.0	9.6	1.90	1.90	2.70	6.50	2.60 ~ 8.40	1,580	600 ~ 2,840	7.2	1.2 + 1.2 + 1.
	2.8 + 2.8 + 5.0	10.6	1.72	1.72	3.06	6.50	2.80 ~ 8.80	1,570	600 ~ 2,920	7.2	1.1 + 1.1 + 1.
	2.8 + 2.8 + 6.0	11.6	1.57	1.57	3.36	6.50	2.80 ~ 8.80	1,570	600 ~ 2,920	7.2	1.0 + 1.0 + 1.
	2.8 + 3.2 + 3.2	9.2	1.98	2.26	2.26	6.50	2.40 ~ 8.00	1,580	580 ~ 2,770	7.2	1.3 + 1.5 + 1.
	2.8 + 3.2 + 4.0	10.0	1.82	2.08	2.60	6.50	2.60 ~ 8.40	1,580	600 ~ 2,850	7.2	1.2 + 1.3 + 1.
	2.8 + 3.2 + 5.0	11.0	1.65	1.89	2.96	6.50	2.80 ~ 8.80	1,530	600 ~ 2,920	7.0	1.1 + 1.2 + 1.
	2.8 + 3.2 + 6.0	12.0	1.52	1.73	3.25	6.50	2.80 ~ 8.80	1,530	600 ~ 2,920	7.0	1.0 + 1.1 + 1.
	2.8 + 4.0 + 4.0	10.8	1.68	2.41	2.41	6.50	2.70 ~ 8.70	1,570	600 ~ 2,910	7.2	1.1 + 1.5 + 1.
	2.8 + 4.0 + 5.0	11.8	1.54	2.20	2.76	6.50	2.80 ~ 9.00	1,540	580 ~ 2,960	7.1	1.0 + 1.4 + 1.
3 Rooms	2.8 + 4.0 + 6.0	12.8	1.42	2.03	3.05	6.50	2.80 ~ 9.00	1,540	580 ~ 2,960	7.1	0.9 + 1.3 + 1.
	2.8 + 5.0 + 5.0	12.8	1.42	2.54	2.54	6.50	2.80 ~ 9.00	1,480	520 ~ 2,750	6.8	0.9 + 1.6 + 1.
	3.2 + 3.2 + 3.2	9.6	2.16	2.16	2.16	6.48	2.40 ~ 8.00	1,580	590 ~ 2,780	7.2	1.4 + 1.4 + 1.
	3.2 + 3.2 + 4.0	10.4	2.00	2.00	2.50	6.50	2.60 ~ 8.40	1,580	600 ~ 2,850	7.2	1.3 + 1.3 + 1.
	3.2 + 3.2 + 5.0	11.4	1.82	1.82	2.86	6.50	2.80 ~ 8.80	1,530	600 ~ 2,930	7.0	1.2 + 1.2 + 1.
	3.2 + 3.2 + 6.0	12.4	1.68	1.68	3.14	6.50	2.80 ~ 8.80	1,530	600 ~ 2,930	7.0	1.1 + 1.1 + 1.
	3.2 + 4.0 + 4.0	11.2	1.86	2.32	2.32	6.50	2.80 ~ 8.70	1,570	600 ~ 2,910	7.2	1.2 + 1.5 + 1.
	3.2 + 4.0 + 5.0	12.2	1.70	2.13	2.67	6.50	2.80 ~ 9.00	1,540	580 ~ 2,960	7.1	1.1 + 1.4 + 1.
	3.2 + 4.0 + 6.0	13.2	1.58	1.97	2.95	6.50	2.80 ~ 9.00	1,540	580 ~ 2,960	7.1	1.0 + 1.3 + 1.
	3.2 + 5.0 + 5.0	13.2	1.58	2.46	2.46	6.50	2.80 ~ 9.00	1,470	520 ~ 2,750	6.7	1.0 + 1.5 + 1.
	4.0 + 4.0 + 4.0	12.0	2.16	2.16	2.16	6.48	2.80 ~ 9.00	1,540	590 ~ 2,950	7.1	1.4 + 1.4 + 1.
	4.0 + 4.0 + 5.0	13.0	2.00	2.00	2.50	6.50	2.80 ~ 9.00	1,480	540 ~ 2,750	6.8	1.3 + 1.3 + 1.

Specification based on ISO 15042 standard.

#### INVERTER MULTI-COMBINATION (CU-4XS32RBZ)

INDOOR UNIT COMBINATION					COOL	ING CAPACITY (k	W)		PC	WER INPUT (W)	CURRENT (A)	MOISTURE
INDUOR ONLI C	MINATION	TOTAL	A	В	C	D	TOTAL	MIN ~ MAX	RATED	MIN - MAX	240V / 50Hz	MOISTURE REMOVAL L/H
	2.8	2.8	2.80				2.80	1.70 ~ 3.40	700	380 ~ 890	3.4	1.6
	3.2	3.2	3.20				3.20	1.70 ~ 4.00	800	380 ~ 1,200	3.9	1.8
1 Room	4.0	4.0	4.00				4.00	1.70 ~ 4.80	1,180	380 ~ 1,480	5.5	2.3
	5.0	5.0	5.00				5.00	1.90 ~ 5.80	1,460	400 ~ 1,890	6.7	2.7
	6.0	6.0	6.00				6.00	1.90 ~ 6.20	1,920	400 ~ 2,070	8.6	3.3
	2.8 + 2.8	5.6	2.80	2.80			5.60	2.40 ~ 5.80	1,440	300 ~ 1,600	6.6	1.6 + 1.6
	2.8 + 3.2	6.0	2.80	3.20			6.00	2.40 ~ 6.70	1,580	300 ~ 2,080	7.2	1.6 + 1.8
	2.8 + 4.0	6.8	2.80	4.00			6.80	2.40 ~ 7.20	2,050	300 ~ 2,430	9.2	1.6 + 2.3
	2.8 + 5.0	7.8	2.80	5.00			7.80	2.40 ~ 8.40	2,340	280 ~ 2,890	10.5	1.6 + 2.7
	2.8 + 6.0	8.8	2.55	5.45			8.00	2.50 ~ 8.40	2,460	310 ~ 2,890	11.1	1.6 + 2.9
	3.2 + 3.2	6.4	3.20	3.20			6.40	2.40 ~ 7.20	1,730	290 ~ 2,310	7.9	1.8 + 1.8
	3.2 + 4.0	7.2	3.20	4.00			7.20	2.40 - ~ 7.90	2,220	290 ~ 2,880	10.0	1.8 + 2.3
2 Rooms	3.2 + 5.0	8.2	3.12	4.88			8.00	2.50 ~ 8.60	2,340	310 ~ 2,890	10.5	1.8 + 2.7
	3.2 + 6.0	9.2	2.78	5.22			8.00	2.50 ~ 8.60	2,340	310 ~ 2,890	10.5	1.6 + 2.9
	4.0 + 4.0	8.0	4.00	4.00			8.00	2.50 ~ 8.10	2,830	320 ~ 3,010	12.7	2.3 + 2.3
	4.0 + 5.0	9.0	3.56	4.44	^.		8.00	2.50 ~ 8.60	2,340	310 ~ 2,890	10.5	2.1 + 2.5
	4.0 + 6.0	10.0	3.20	4.80			8.00	2.50 ~ 8.60	2,340	310 ~ 2,890	10.5	1.8 + 2.6
	5.0 + 5.0	10.0	4.00	4.00		•	8.00	2.50 ~ 9.20	2,050	300 ~ 2,900	9.2	2.3 + 2.3
	5.0 + 6.0	11.0	3.64	4.36			8.00	2.50 ~ 9.20	2,050	300 ~ 2,900	9.2	2.1 + 2.4
	6.0 + 6.0	12.0	4.00	4.00			8.00	2.50 ~ 9.20	2,050	300 ~ 2,900	9.2	2.3 + 2.3
	2.8 + 2.8 + 2.8	8.4	2.66	2.66	2.66		7.98	2.90 ~ 9.30	2,160	360 ~ 3,170	9.7	1.6 + 1.6 + 1.6
	2.8 + 2.8 + 3.2	8.8	2.55	2.55	2.90		8.00	2.90 ~ 9.40	2,100	390 ~ 3,180	9.5	1.6 + 1.6 + 1.7
	2.8 + 2.8 + 4.0	9.6	2.33	2.33	3.33		7.99	2.90 ~ 9.50	2,100	390 ~ 3,180	9.5	1.5 + 1.5 + 1.9
	2.8 + 2.8 + 5.0	10.6	2.11	2.11	3.77		7.99	2.90 ~ 10.0	1,870	390 ~ 3,180	8.4	1.4 + 1.4 + 2.2
	2.8 + 2.8 + 6.0	11.6	1.93	1.93	4.14		8.00	2.90 ~ 10.0	1,870	390 ~ 3,180	8.4	1.2 + 1.2 + 2.4
	2.8 + 3.2 + 3.2	9.2	2.43	2.78	2.78		7.99	2.90 ~ 9.50	2,050	390 ~ 3,110	9.2	1.5 + 1.6 + 1.6
	2.8 + 3.2 + 4.0	10.0	2.24	2.56	3.20		8.00	2.90 ~ 9.60	2,050	390 ~ 3,180	9.2	1.5 + 1.6 + 1.8
	2.8 + 3.2 + 5.0	11.0	2.03	2.33	3.64		8.00	2.90 ~ 10.10	1,870	390 ~ 3,180	8.4	1.3 + 1.5 + 2.1
	2.8 + 3.2 + 6.0	12.0	1.87	2.13	4.00		8.00	2.90 ~ 10.10	1,870	390 ~ 3,180	8.4	1.2 + 1.4 + 2.3
	2.8 + 4.0 + 4.0	10.8	2.08	2.96	2.96		8.00	2.90 ~ 9.60	2,050	390 ~ 3,180	9.2	1.3 + 1.7 + 1.7
	2.8 + 4.0 + 5.0	11.8	1.90	2.71	3.39		8.00	2.90 ~ 10.10	1,870	390 ~ 3,180	8.4	1.2 + 1.6 + 1.9
	2.8 + 4.0 + 6.0	12.8	1.75	2.50	3.75		8.00	2.90 ~ 10.10	1,870	390 ~ 3,180	8.4	1.1 + 1.5 + 2.2
	s 2.8 + 5.0 + 5.0	12.8	1.74	3.13	3.13		8.00	2.90 ~ 10.50	1,760	430 ~ 3,110	7.9	1.1 + 1.8 + 1.8
	2.8 + 5.0 + 6.0	13.8	1.62	2.90	3.48		8.00	2.90 ~ 10.50	1,760	430 ~ 3,110	7.9	1.0 + 1.7 + 2.0
	2.8 + 6.0 + 6.0	14.8	1.52	3.24	3.24		8.00	2.90 ~ 10.50	1,760	430 ~ 3,110	7.9	1.0 + 1.8 + 1.8
3 Rooms	3.2 + 3.2 + 3.2	9.6	2.67	2.67	2.66		8.00	2.90 ~ 9.70	1,990	390 ~ 3,180	9.0	1.6 + 1.6 + 1.6
	3.2 + 3.2 + 4.0	10.4	2.46	2.46	3.08		8.00	2.90 ~ 9.70	1,990	390 ~ 3,180	9.0	1.5 + 1.5 + 1.7
	3.2 + 3.2 + 5.0	11.4	2.25	2.25	3.50		8.00	2.90 ~ 10.20	1,820	390 ~ 3,180	8.2	1.5 + 1.5 + 2.0
	3.2 + 3.2 + 6.0	12.4	2.06	2.06	3.88		8.00	2.90 ~ 10.20	1,820	390 ~ 3,180	8.2	1.3 + 1.3 + 2.3
	3.2 + 4.0 + 4.0	11.2	2.28	2.86	2.86		8.00	2.90 ~ 9.70	1,990	390 ~ 3,180	9.0	1.5 + 1.7 + 1.7
	3.2 + 4.0 + 5.0	12.2	2.10	2.62	3.28		8.00	2.90 ~ 10.20	1,820	420 ~ 3,180	8.2	1.4 + 1.6 + 1.9
	3.2 + 4.0 + 6.0	13.2	1.94	2.42	3.64		8.00	2.90 ~ 10.20	1,820	420 ~ 3,180	8.2	1.3 + 1.5 + 2.1
	3.2 + 5.0 + 5.0	13.2	1.94	3.03	3.03		8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.3 + 1.7 + 1.7
	3.2 + 5.0 + 6.0	14.2	1.80	2.82	3.38		8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.2 + 1.7 + 1.9
	3.2 + 6.0 + 6.0	15.2	1.68	3.16	3.16		8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.1 + 1.8 + 1.8
	4.0 + 4.0 + 4.0	12.0	2.66	2.66	2.66		7.98	2.90 ~ 9.70	1,990	390 ~ 3,110	9.0	1.6 + 1.6 + 1.6
	4.0 + 4.0 + 5.0	13.0	2.46	2.46	3.08		8.00	2.90 ~ 10.30	1,820	420 ~ 3,180	8.2	1.5 + 1.5 + 1.7
	4.0 + 4.0 + 6.0	14.0	2.29	2.29	3.42		8.00	2.90 ~ 10.30	1,820	420 ~ 3,180	8.2	1.5 + 1.5 + 2.0
	4.0 + 5.0 + 5.0	14.0	2.28	2.86	2.86		8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.5 + 1.7 + 1.7
	4.0 + 5.0 + 6.0	15.0	2.13	2.67	3.20		8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.4 + 1.6 + 1.8
	5.0 + 5.0 + 5.0	15.0	2.66	2.66	2.66		7.98	2.90 ~ 10.50	1,720	510 ~ 2,830	7.8	1.6 + 1.6 + 1.6

Specification based on JIS C 9612 standard.

A minimum of 2 indoor units must be connected.

Switchable between 8.5amp or 11amp.

<sup>•</sup> A minimum of 2 indoor units must be connected.

Switchable between 8.5amp or 11amp.

	INDOOR UNIT COMBINATION			E No. 1	COOL	ING CAPACITY (A	(W)		PO	WER INPUT (W)	CURRENT (A)	MOISTURE
INDOOR UNIT	COMBINATION	TOTAL	A	В	C	D	TOTAL	MIN ~ MAX	RATED	MIN - MAX	240V / 50Hz	MOISTURE REMOVAL L/H
	2.8 + 2.8 + 2.8 + 2.8	11.2	2.00	2.00	2.00	2.00	8.00	2.90 ~ 10.50	1,820	420 ~ 3,250	8.2	1.3 + 1.3 + 1.3 + 1
	2.8 + 2.8 + 2.8 + 3.2	11.6	1.93	1.93	1.93	2.21	8.00	2.90 ~ 10.50	1,760	420 ~ 3,180	7.9	1.2 + 1.2 + 1.2 + 1
	2.8 + 2.8 + 2.8 + 4.0	12.4	1.81	1.81	1.81	2.57	8.00	2.90 ~ 10.50	1,760	430 ~ 3,180	7.9	1.2 + 1.2 + 1.2 + 1
	2.8 + 2.8 + 2.8 + 5.0	13.4	1.67	1.67	1.67	2.99	8.00	2.90 ~ 10.50	1,710	470 ~ 2,900	7.8	1.1 + 1.1 + 1.1 + 1
	2.8 + 2.8 + 2.8 + 6.0	14.4	1.56	1.56	1.56	3.32	8.00	2.90 ~ 10.50	1,710	470 ~ 2,900	7.8	1.0 + 1.0 + 1.0 + 1
	2.8 + 2.8 + 3.2 + 3.2	12.0	1.87	1.87	2.13	2.13	8.00	2.90 ~ 10.50	1,760	430 ~ 3,110	7.9	1.2 + 1.2 + 1.4 +
	2.8 + 2.8 + 3.2 + 4.0	12.8	1.75	1.75	2.00	2.50	8.00	2.90 ~ 10.50	1,760	430 ~ 3,110	7.9	1.1 + 1.1 + 1.3 + 1
	2.8 + 2.8 + 3.2 + 5.0	13.8	1.62	1.62	1.86	2.90	8.00	2.90 ~ 10.50	1,720	500 ~ 2,900	7.8	1.0 + 1.0 + 1.2 +
	2.8 + 2.8 + 3.2 + 6.0	14.8	1.51	1.51	1.73	3.25	8.00	2.90 ~ 10.50	1,720	500 ~ 2,900	7.8	1.0 + 1.0 + 1.1 +
	2.8 + 2.8 + 4.0 + 4.0	13.6	1.65	1.65	2.35	2.35	8.00	2.90 ~ 10.50	1,760	430 ~ 3,110	7.9	1.1 + 1.1 + 1.5 +
	2.8 + 2.8 + 4.0 + 5.0	14.6	1.53	1.53	2.19	2.75	8.00	2.90 ~ 10.50	1,720	500 ~ 2,900	7.8	1.0 + 1.0 + 1.4 +
	2.8 + 2.8 + 4.0 + 6.0	15.6	1.44	1.44	2.04	3.08	8.00	2.90 ~ 10.50	1,720	500 ~ 2,900	7.8	0.9 + 0.9 + 1.3 +
	2.8 + 2.8 + 5.0 + 5.0	15.6	1.44	1.44	2.56	2.56	8.00	2.90 ~ 10.50	1,730	560 ~ 2,770	7.9	0.9 + 0.9 + 1.6 +
4 Rooms	2.8 + 3.2 + 3.2 + 3.2	12.4	1.82	2.06	2.06	2.06	8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.2 + 1.3 + 1.3 +
	2.8 + 3.2 + 3.2 + 4.0	13.2	1.70	1.94	1.94	2.42	8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.1 + 1.3 + 1.3 +
	2.8 + 3.2 + 3.2 + 5.0	14.2	1.58	1.80	1.80	2.82	8.00	2.90 ~ 10.50	1,720	510 ~ 2,830	7.8	1.0 + 1.2 + 1.2 +
	2.8 + 3.2 + 3.2 + 6.0	15.2	1.47	1.68	1.68	3.17	8.00	2.90 ~ 10.50	1,720	510 ~ 2,830	7.8	0.9 + 1.1 + 1.1 +
	2.8 + 3.2 + 4.0 + 4.0	14.0	1.59	1.83	2.29	2.29	8.00	2.90 ~ 10.50	1,760	460 ~ 3,040	7.9	1.0 + 1.2 + 1.5 +
	2.8 + 3.2 + 4.0 + 5.0	15.0	1.49	1.71	2.13	2.67	8.00	2.90 ~ 10.50	1,720	510 ~ 2,830	7.8	0.9 + 1.1 + 1.4 +
	2.8 + 4.0 + 4.0 + 4.0	14.8	1.52	2.16	2.16	2.16	8.00	2.90 ~ 10.50	1,710	460 ~ 3,040	7.8	1.0 + 1.4 + 1.4 +
	3.2 + 3.2 + 3.2 + 3.2	12.8	2.00	2.00	2.00	2.00	8.00	2.90 ~ 10.50	1,710	460 ~ 3,040	7.8	1.3 + 1.3 + 1.3 +
	3.2 + 3.2 + 3.2 + 4.0	13.6	1.88	1.88	1.88	2.36	8.00	2.90 ~ 10.50	1,710	460 ~ 2,970	7.8	1.2 + 1.2 + 1.2 +
	3.2 + 3.2 + 3.2 + 5.0	14.6	1.75	1.75	1.75	2.75	8.00	2.90 ~ 10.50	1,720	510 ~ 2,840	7.8	1.1 + 1.1 + 1.1 +
	3.2 + 3.2 + 3.2 + 6.0	15.6	1.64	1.64	1.64	3.08	8.00	2.90 ~ 10.50	1,720	510 ~ 2,840	7.8	1.0 + 1.0 + 1.0 +
	3.2 + 3.2 + 4.0 + 4.0	14.4	1.78	1.78	2.22	2.22	8.00	2.90 ~ 10.50	1,710	460 ~ 2,970	7.8	1.1 + 1.1 + 1.4 +
	3.2 + 3.2 + 4.0 + 5.0	15.4	1.66	1.66	2.08	2.60	8.00	2.90 ~ 10.50	1,720	510 ~ 2,840	7.8	1.1 + 1.1 + 1.3 +
	3.2 + 4.0 + 4.0 + 4.0	15.2	1.67	2.11	2.11	2.11	8.00	2.90 ~ 10.50	1,710	460 ~ 2,970	7.8	1.1 + 1.4 + 1.4 +

#### FEATURES COMPARISON

	Inverte	er Deluxe	Inverter Deluxe Multi-Split	Inverter Mult	i-Combination
Split Type		Wall-N	1ounted		Mini Cassette
•• <u>•</u>	CS-XS9RKZW CS-XS12RKZW	CS-XS18RKZW CS-XS24RKZW CS-XS28RKZ	CS-XS9RKZW CS-XS12RKZW CS-XS15RKZW CS-XS18RKZW	CS-XS9RKZW CS-XS12RKZW CS-XS18RKZW CS-XS18RKZW CS-XS18RKZW	CS-512MB4ZW CS-518MB4ZW CS-524MB4ZW
Cooling Models				5	
		CON	MFORT		
ECONAVI ECONAVI	•	•	•	•	
°C Temperature Wave	•	•	• .	•	
AUTOCOMPORT AUTOCOMFORT	•	•	•	•	
Inverter Control	•	• 2.	•	•	•
€ mode Quiet Mode	•	• .	•	•	•
Powerful Made	•	•	•	•	•
Soft Dry Operation Mode	•	•	•	•	•
Personal Airflow Creation	•	•	•	•	
Airflow Direction Control [Up & Down]					•
Automatic Operation Mode (Cooling)	•	•	•	•	•
Proce (Coaring)		CLEAN	IER AIR		
		GLEAN	ICN AIN		
● nanoe/= Nanoe-6	•	•	•	•	
Odour-Removing Function	•	•	•	•	•
Removable, Washable Panel	•	•	•	•	•
Anti - Mould, One-Touch Air Filter					•
		CONVE	ENIENCE		
24 24-Hour Dual ON & OFF Real Setting Timer	•	•	•	•	
24-Hour ON & OFF Real Setting Timer					•
LCD Wireless Remote	•	•	•	•	•
Wired Remote Control	(Optional)	[Optional]	(Optional)	[Optional]	
			BILITY		
		RELIA			
Random Auto Restart [32 Restart Patterns]	•	•	•	•	•
Blue Fin Condenser	•	•	•	•	•
Long Piping (Numbers indicate the maximum pipe length)	15 m	20m (XS18/XS24) 30m (XS28)	**refer page 12	**refer page 18	**refer page 18
Top-Panel Maintenance Access	•		•	•	•
Self-Diagnostic Function	•	•	•	•	•

<sup>•</sup> Specification based on JIS C 9612 standard. • A minimum of 2 indoor units must be connected. • Switchable between 8.5amp or 11amp.

#### FEATURES EXPLANATION

#### AIRFLOW DIRECTION CONTROL FCONAVI QUIET MODE -- 1 mode mode ECONAVI (UP & DOWN Detects and reduces waste for more energy savings. AUTOMATIC OPERATION MODE (COOLING) TEMPERATURE WAVE POWERFUL MODE (29 \*\* 00 °C Rhythmic temperature-controlled pattern to save energy without sacrificing comfort. SOFT DRY OPERATION MODE 00 AUTOCOMFORT Starts with cooling to dehumidify, then provides continuous breeze at a low frequency to keep a room dry without much change to the temperature. Detects high activity levels and adjusts cooling power to improve comfort. INVERTER CONTROL PERSONAL AIRFLOW CREATION ----Varies the rotation speed of the compressor for higher energy savings. Vertical and horizontal airflow patterns can be combined as desired to achieve optimum comfort, with operation possible by remote even from a distance. CLEANER AIR REMOVABLE, WASHABLE PANEL nanoe-G ODOUR-REMOVING FUNCTION \* @ nance - G With this function, there's no unpleasant odor when the unit starts up. That's because the fan remains off momentarily, while the source of the odour inside the nance-s works effectively on airborne particles including PM2.5, adhesive and in-filter micro-organisms such as bacteria, viruses and mould ensuring a ONE-TOUCH AIR FILTER cleaner living environment air conditioner is suppressed. The unit must be in cool or dry mode and the fan speed CONVENIENCE 24-HOUR DUAL ON & OFF LCD WIRELESS REMOTE CONTROL 24-HOUR ON & OFF (1) 24 DUAL (1)24 Miles Com REAL SETTING TIMER REAL SETTING TIMER This feature enables you to preset two different sets of start/stop operation timer (hour and minute) within a 24-hour time frame. The exact operating time (hour and minute) of the air conditioner can be set in advance. From here on, the WIRED REMOTE CONTROL unit will operate in accordance to these preset hours every day until the system is reset. RELIABILITY RANDOM AUTO RESTART LONG PIPING SELF-DIAGNOSTIC FUNCTION 25m Should a malfunction occur, the unit diagnoses the problem and shows the corresponding alphanumeric code. This allows for quicker servicing. BLUE FIN CONDENSER TOP-PANEL MAINTENANCE ACCESS \* O 1

#### OPTIONAL ACCESSORIES

■ PIPE SIZE REDUCER		■ PIPE SIZE EXPANDER	■ REMOTE CONTROL
Use at the indoor unit's connection port		Use at the outdoor unit's connection port	Wired Remote Control
CZ-MA1P	CZ-MA3P	CZ-MA2P	CZ-RD514C
CS-XS12RKZW, CS-XS15RKZW, CS-XS18RKZW, CS-S12MB4ZW, CS-S18MB4ZW, CS-ME18PD3EA	CS-XS24RKZW, CS-S24MB4ZW	CS-XS24RKZW, CS-S24MB4ZW	CS-XS9RKZW, CS-XS12RKZW, CS-XS18RKZW, CS-XS24RKZW, CS-XS28RKZ

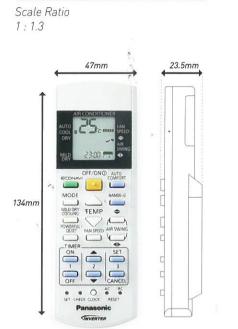
## BIGGER, BETTER, EASIER.

Our new remote control is designed with your needs in mind. Now you can easily operate your air conditioner quicker.



#### **BIGGER**

The larger remote control fits ergonomically in your palm and makes it easier to read and activate any button on the remote control.



PKZ (2014)



#### BETTER

A larger LCD screen allows for better visibility of icons.





#### **EASIER**

The extra large buttons are easy to use and see. This makes it easier to push any button on the remote control.



\* Applicable to PREMIUM INVERTER & Deluxe non-Inverter only.

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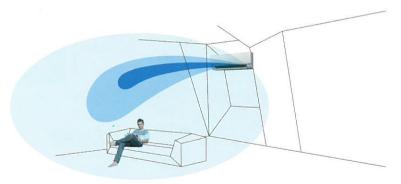
# HOW DOES SHOWER COOLING WORK?

#### **DISPERSED AIRFLOW**

AEROWINGS automatically adjusts the inner and outer flap so that airflow is directed upwards along the ceiling.

#### SHOWER COOLING

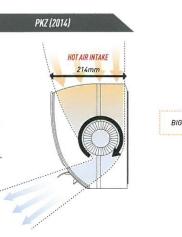
Cool air then showers down naturally and spreads over a wider area of room.

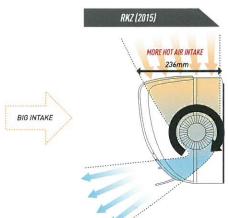


#### **NEW DESIGN**

#### **BIGGER INTAKE**

Panasonic Air Conditioners feature a new intake grille which is 22 mm wider and improved indoor fan speed that goes up to a super-high fan speed at start up. The new chassis design generates bigger air volume that contributes to faster cooling.





### NEWAEROWINGS



After reaching set temperature, the twin flaps direct airflow towards the ceiling activating the Shower Cooling effect for more comfortable cooling.

#### CONTINUOUS DIRECT AIRFLOW AFTER REACHING SET TEMPERATURE



If direct airflow continues, you may start to feel too cold.

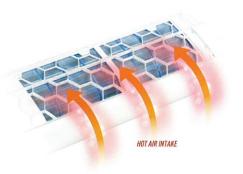
#### INDIRECT AIRFLOW AFTER REACHING SET TEMPERATURE



After reaching the set temperature, the twin flaps direct air towards the ceiling to create the Shower Cooling effect. Then, Human Activity Sensor detects the level of activity to keep you comfortable.

#### HONEYCOMB INTAKE GRILLE

New Honeycomb Intake Grille has a wider opening to increase the suction of hot air from the room so that the room can be cooled faster. The stronger honeycomb structure also offers the air conditioner better protection.



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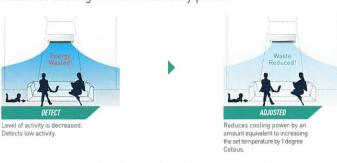
### ECONAVI

# HOW DOES HUMAN ACTIVITY DETECTION WORK?

ECONAVI monitors activity and room conditions to detect where energy is normally wasted, then adjusts cooling power accordingly. With Intelligent Eco Sensors, it adjusts to changes in human movement, activity levels, absence and sunlight intensity. With a touch of a button, 5 energy saving features get activated:

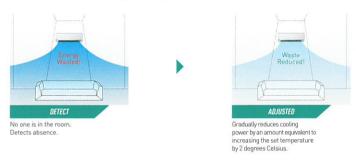
#### **ACTIVITY DETECTION**

ECONAVI detects changes in activity levels and reduces the waste of cooling with unnecessary power.



#### **ABSENCE DETECTION**

ECONAVI detects human absence in the room and reduces the waste of cooling an empty room.



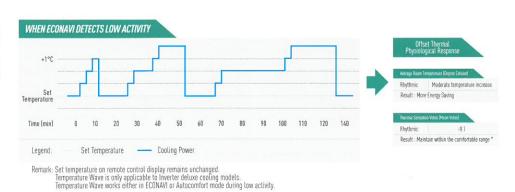
#### AREA SEARCH

ECONAVI detects changes in human movements and reduces the waste of cooling the unoccupied area of the room.

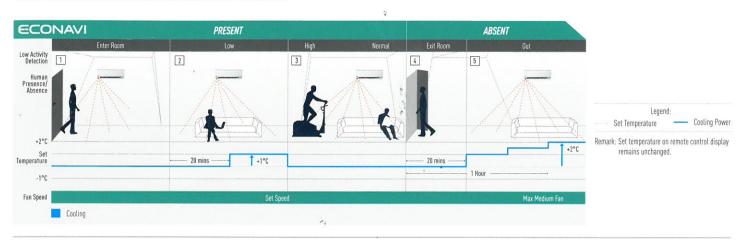


#### TEMPERATURE WAVE

ECONAVI with Temperature Wave incorporates a unique pattern of Temperature Shifting Control to realise even more energy savings without sacrificing comfort.



#### HOW DOES ECONAVI HUMAN ACTIVITY WORK?



#### **HUMAN ACTIVITY SENSOR**

#### ECONAVI DUAL SENSOR

ECONAVI dual sensor consists of High Precision Sensor and Fresnel Lens. These sensors can detect wasted energy and automatically select an optimum energy-saving operation based on 5 factors – Activity Detection, Absence Detection, Area Search, Temperature Wave and Sunlight Detection.

#### High Precision Sensor

This high precision sensor analyses and judges the detected infrared ray reaction.

#### Fresnel Lens

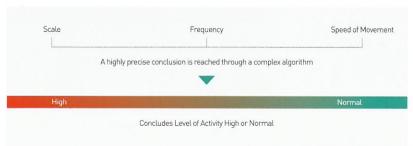
This optimal design directs the infrared rays from the entire room to the sensor.



#### DETECTING HUMAN PRESENCE



#### DETERMINING THE LEVEL OF HUMAN ACTIVITY



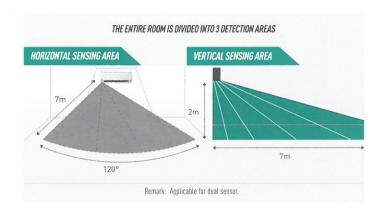
#### ECONAVI

#### HIGH-PRECISION SENSING

All objects emit infrared rays, which although invisible, can be detected as heat by ECONAVI's Human Activity Sensor if it is within the detection zone. When an object moves within its detection zone, ECONAVI compares the object's temperature with the room temperature to determine if it is human, and level of activity based on its movement.

#### **COVERAGE CAPABILITIES**

Human Activity Sensor covers a wider area due to its improved area detection function.



#### DIFFERENTIATING OBJECTS

OBJE	CTS	DIFFERENCE IN TEMPERATURE +	- MOVEMENT	DETECTION
Eletrical Products		$\checkmark$	×	Concludes it is not human
Small Insects	Dur	$\overline{\mathbf{z}}$	~	Concludes it is not human  Both changes may be detected, but they are
A Rolling Ball		×		too small to have any effect on the sensor.  Concludes it is not human
	•	Δ.	V	Concludes it is not human*
Pets	M	$\checkmark$	$\checkmark$	From the difference in temperatures and the nature of the object's movement, ECONAVI can determine if it's human*.
				*The sensor may deem pets as humans, unless it moves within the detection zone at speeds that are not humanly possible.

#### SENSOR DETECTION PRINCIPLE

Human Activity Sensor detects human activity level and directs airflow to occupied or high activity zone. LED indicators indicating ECONAVI is detecting and functioning.







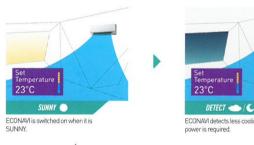


Remark: When detecting any change in movements, there will be a time delay between the LED indicator lighting up and a change of airflow direction.

This is to avoid over-sensitive louver movements which will not contribute to energy savings.

# HOW DOES SUNLIGHT DETECTION WORK?

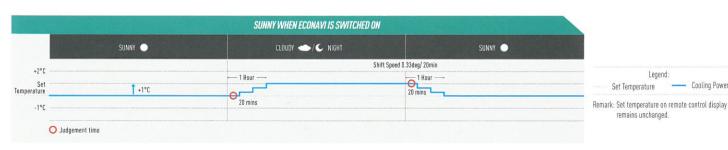
ECONAVI detects changes in sunlight intensity in the room and judges whether it is sunny or cloudy/night. It reduces the waste of cooling under less sunlight conditions.

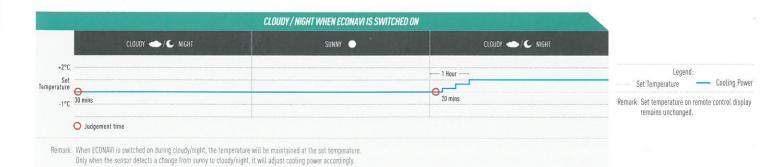


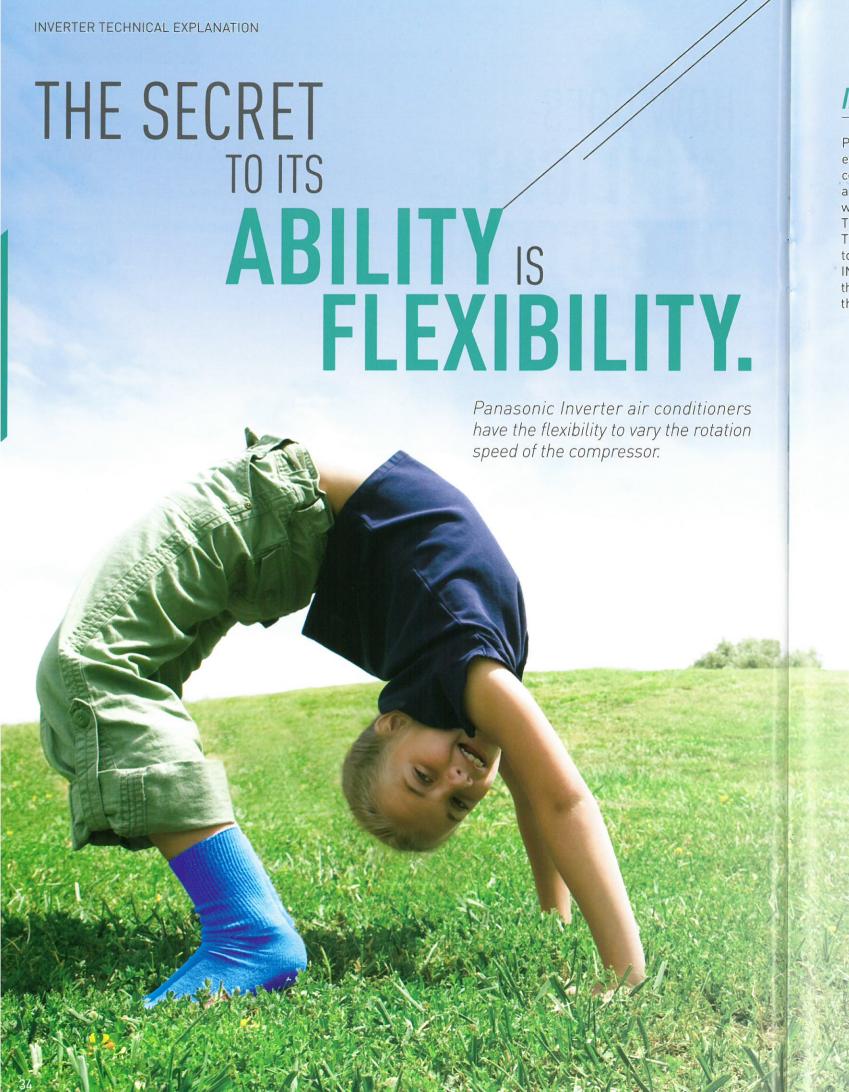


When weather changes from sunny to cloudy/night, ECONAVI detects less sunlight intensity and determines less cooling power is required. If cooling power remains the same, energy will be wasted. ECONAVI detects this waste and reduces cooling power by an amount equivalent to increasing the set temperature by 1 degree Celsius.

#### HOW DOES ECONAVI SUNLIGHT SENSOR WORK?







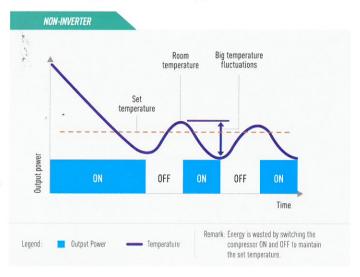


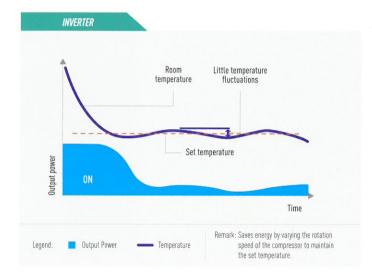
#### INVERTER REDUCES ELECTRICITY CONSUMPTION

Panasonic INVERTER air conditioners give you exceptional energy saving performance while ensuring you stay comfortable at all times. A conventional non-INVERTER air conditioner can only operate at a constant speed which is too powerful to maintain the set temperature. Thus, it switches the compressor on and off repeatedly. This results in wider temperature fluctuations leading to wasteful consumption of energy. The Panasonic INVERTER air conditioner varies the rotation speed of the compressor, providing a precise method of maintaining the set temperature.

#### PERFORMANCE COMPARISON

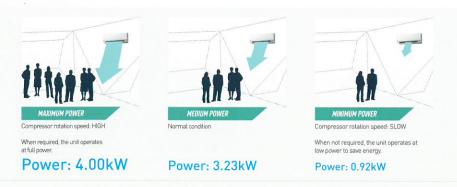
ECONAVI detects changes in activity levels and reduces the waste of cooling with unnecessary power.





#### CONSTANT COMFORT

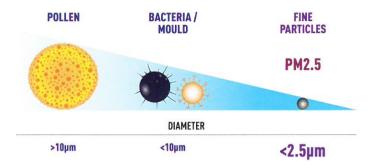
Precise temperature control with a wide power output range enables an INVERTER air conditioner to meet different room occupancy levels – thus ensuring constant comfort.



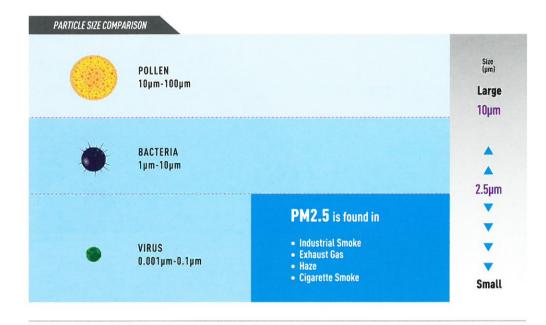
Graph shows the 1.5HP Inverter Model (CS-XS12RKZW / CU-XS12RKZ) wide power output range during cooling.

### WHAT IS PM2.5?

"Particulate matter," also known as PM is made up of a number of components including extremely small particles and liquid droplets. Sized at less than 2.5 micrometers (PM2.5), these particles are said to pose health problems as they can easily enter our lungs.



#### PARTICLE SIZE COMPARISON



#### SOURCES OF PM2.5

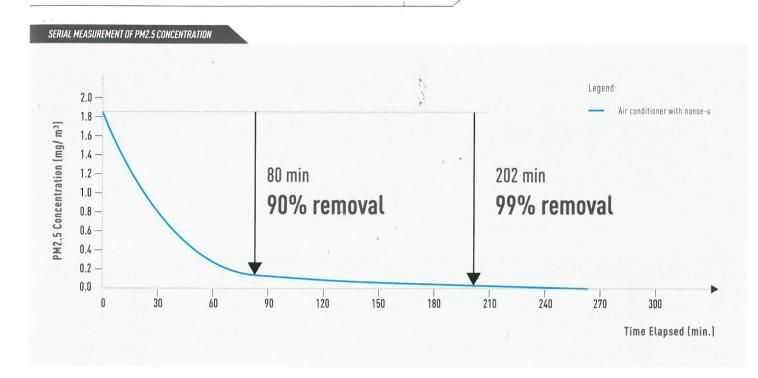
PM2.5 can be found suspended in the air, including dust, dirt, smoke and liquid droplets. These fine particles come from man-made sources such as the combustion of fossil fuels, open burning and industrial processes as well as natural ones, which include sea sprays and dust carried by strong winds.

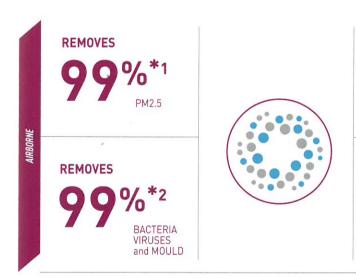






#### PM2.5 REMOVAL EFFICIENCY BASED ON TIME





- \*1 PM2.5 Removal was certified by FCG Research Institute, Inc.
- Test Report no. : 25034 PM2.5 : Cigarette Smoke (as PM2.5)

Effectiveness is measured on 0.3µm-2.5µm. (Specific size only)
This removal effect is not proven for all the airborne toxic substances

All results are based on specific testing conditions.
All tests are not demonstrated under actual usage situation

- \*2 Airborne Removal was certified by Kitasato Research Center for Environmental Science
- KRCES-Bio. Test Report no.: 23 0182 Bacteria: Staphylococcus aureus (NBRC 12732)
- KRCES-Env. Test Report no. : 22\_0008
- Virus : Escherichia coli phage (øX-174 ATCC 13706-B1) : Influenza (H1N1) 2009 Virus
- KRCES-Env. Test Report no. : 23\_0140 Mould : Penicillium pinophilum [NBRC 6345]

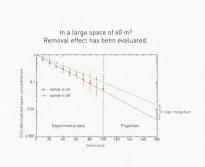
All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

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#### THE EFFECTIVENESS OF PM2.5

#### **AIRBORNE**

#### DATA ON REMOVAL OF AIRBORNE BACTERIA WAS PRESENTED BY HARVARD SCHOOL OF PUBLIC HEALTH RESEARCHERS AT NANO-SYMPOSIUM AT KYOTO UNIVERSITY, 2012



The effect after 100 minutes in a 40 m³ test space (about the size of a 10 tatami mat room), not the effect in a space where

"Performance evaluation of a novel ionizer for air purification applications". Dr. S. Rudnick et al. Harvard School of Public Health, Environmental Health Nanoscience Lab.

nanoe-G
A study of the removal effect of airborne bacteria by using an air-conditioner incorporating nanoe-G was carried out in a large space, and the results were presented at Nano-Symposium jointly held in September 2012 by Harvard University and Kyoto University.

Test methods: Bacteria removal method: Release of nanoe-g ions.

Target: Airborne bacteria, Test results: It is estimated that after three hours of operation the nanoe-6 will achieve 2.7  $\log_{10}$  reductions,  $\sim 1 \log_{10}$  reduction more, as compared to without

TARGET SUBSTANCE	SUBSTANCE NAME	EFFECTIVENESS	TESTING INSTITUTE	TEST REPORT NO	METHOD	RESULT
PM2.5	Cigarette Smoke [as PM2.5]	99%	FCG Research Institute, Inc	Test Report No. 25034	The AC with nanoe-6 was operated in a test room [23m³] and the concentration of PM2.5 was measured by PM2.5 Digital Dust Indicator.	99% removal from the air after 202 minutes of operation.
Bacteria	Staphylococcus aureus [NBRC 12732]	99%	Kitasato Research Center for Environmental Science	KRCES-Bio. Test Report No. 23_0182	The AC with nance-6 was operated in a test room (25m³) and aerosol was collected and bacterial count was calculated.	99% removal from the air after 150 minutes of operation.
	Escherichia coli phage	99%	Kitasato Research Center for Environmental Science	KRCES-Env. Test Report No. 22_0008	The AC with nanoe-6 was operated in a test room [25m³] and airborne phages were collected and phage count of the collected air was calculated.	99% removal from the air after 120 minutes of operation.
	(øX-174 ATCC 13706-B1)	99%	Kitasato Research Center for Environmental Science	KRCES-Env. Test Report No. 22_0008	nanoe-G was operated in a test chamber (200 Litre) and the phages were collected and phage count of the collected air was calculated.	99% removal from the air after 5 minutes of operation.
Virus				-	nanoe-6 was operated in a test chamber (200 Litre) and the influenza viruses were collected and the virus titers were calculated by the Reed and Muench method.	99% removal from the air after 5 minutes of operation.
	Influenza (H1N1) 2009 virus	99%	Kitasato Research Center for Environmental Science	KRCES-Env. Test Report No. 22_0008	Influenza (H1N1) 2009 virus, nanoc cannot be tested in large test room (25° When tested in 200 Litre chamber decrease Influenza (H1N1) 2009 virus i for 5 minutes. Additionally when tester nanoe-6 can remove 99.5% of Coli	e-G removal effectiveness m³].  , nanoe-G was able to 99%] when it was operated in larger test room (25m³], ohage virus when operated the influenza virus could phage according to the test ere. It appeared that the n (25m³] would be able to
Mould	Penicillium pinophilum (NBRC 6345)	99%	Kitasato Research Center for Environmental Science	KRCES-Bio. Test Report No. 23_0140	The AC with nanoe-6 was operated in a test room (25m³) and aerosol was collected and fungal spores count was calculated.	99% removal from the air after 90 minutes of operation.
	PM2.5  Bacteria	Bacteria  Staphylococcus aureus [NBRC 12732]  Figure 1	PM2.5   Cigarette Smoke   99%	PM2.5   Cigarette Smoke   as PM2.5   PCG Research   Institute, Inc.	PM2.5   Cigarette Smoke	PM2.5   Cigaretie Smoke [as PM2.5]   99%   FCG Research Institute, Inc   Test Report Indicator.    FCG Research Institute, Inc   Test Report Institute, Inc   Test Report Indicator.   Test Report Indicator.   Test Report Indicator.   The AC with nanoe-o was operated in a test room IZ5m*l and aerosol was collected and bacterial count was calculated.   Test Report Institute, Inc   Test Report Institute, Indicator.   Test Report Institute, Inc   Test Institute, Inc   Test Institu

Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.



#### **ADHESIVE**

ODOUR DEODORISATION: THE ODOUR ADHERED ON THE CURTAINS AND SOFA Decrease in odour intensity by one level after 2 hours of operation. Adhesive smell of tobacco smoke 3 25 1 Level Down Test Chamber: Measurement Method: Six-level odour intensity indication method Test report No .: 13-1204 2.25 Odour Intensity Degree of Smell AC with nanoe-g Natural Decay No odour Barely able to detect (detection threshold) Able to recognise a smell, but weak (recognition threshold)
Easily perceptible Initial After 2 hours

4	TARGET SUBSTANCE	SUBSTANCE NAME	EFFECTIVENESS	TESTING INSTITUTE	TEST REPORT NO	METHOD	RESULT
	PM2.5	Cigarette smoke (as PM2.5)	99%	FCG Research Institute, Inc	Test Report No. 25034	The AC with nanoe-6 was operated in a test room (23m³) and the concetration of PM2.5 was measured by PM2.5 Digital Dust Indicator.	99% removal from the air after 202 minutes of operation.
	Bacteria	Staphylococcus aureus (NBRC 12732)	99%	Japan Food Research Laboratories	Test Report No. 11047933001-02	The AC with nanoe-G was operated in a test space [10m³] and viable cells were counted by pour plate method.	99% inactivation after 24 hour operation of nanoe-g. (compared to the original condition/ ventilation mode)
ADHESIVE	Virus	Bacteriophage [Phi X 174 NBRC 103405]	99%	Japan Food Research Laboratories	Test Report No. 11073649001-02	nanoe-G was operated in a test box (90 Litrel and phage infectivity titer was determined by plaque technique.	99% inactivation after 120 minutes operation of nanoe-6. (compared to non-operation)
	Mould	Cladosporium cladosporioides [NBRC 6348]	Inhibit Mould Growth	Japan Food Research Laboratories	Test Report No. 11047937001-02	nanoe-G was operated in a test box {1m³} and colonies on the plate were counted.	The growth of the subject was inhibited. (>85% after 7 days)
	Odour	Smell of tobacco smoke	Decrease by one level	OMI ODOR-AIR SERVICE Co.Ltd.	Test Report No. 13-1204	The AC with nanoe-G was operated in a test room [20m³] and the deodorisation effect on a piece of cloth impregnated with odour components of cigarette smoke was evaluated using six-level odour intensity indication method.	Decrease in odour intensity by one level after 120 minutes of operation.

Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

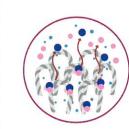
**DEACTIVATES** and VIRUSES INHIBITS MOULD GROWTH



- \*3 Adhesive Deactivation was certified by Japan Food Research Laboratories
- Test Report number : 11047933001-02 Bacteria : Staphylococcus aureus (NBRC 12732)
- Test Report number : 11073649001-02 Virus : Bacteriophage [Phi X 174 NBRC 103405]
- Test Report number : 11047937001-02
- Mould: Cladosporium cladosporioides (NBRC 6348)

All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

DEODORISES **ADHESIVE ODOUR** (TOBACCO SMELL)

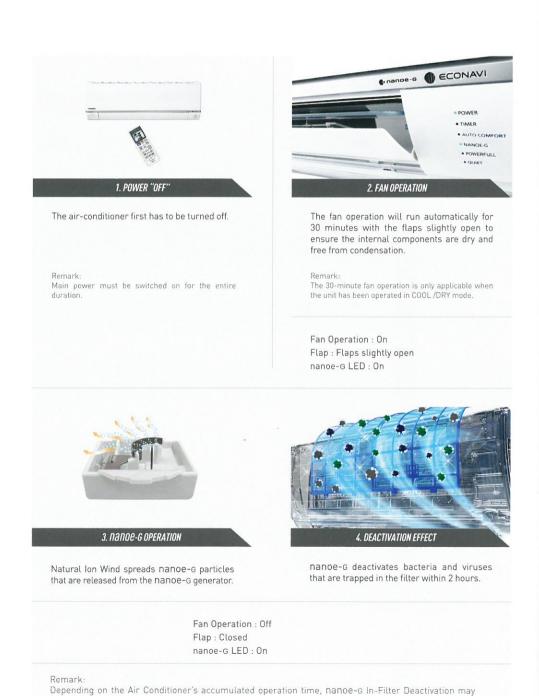


Adhesive odour deodorisation was certified by OMI ODOR-AIR SERVICE Co.

All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

#### • nanoe-g

# HOW DOES IN-FILTER DEACTIVATION WORK?



be activated only once a day.

#### IN-FILTER DEACTIVATION

4	TARGET SUBSTANCE	SUBSTANCE NAME	EFFECTIVENESS	TESTING INSTITUTE	TEST REPORT NO	METHOD	RESULT
	Bacteria	Staphylococcus aureus (NBRC 12732)	99%	Japan Food Research Laboratories	Test Report No. 12037932001	The test piece impregnated with Staphylococcus aureus was placed on the filter of the Air Conditioner indoor unit, and then nanoe-o was operated. After the test piece was collected, viable cells were counted. * test substance was placed on the 4 locations of the filter; upper/lower right and upper/lower left.	99% of deactivation after 2-hour nanoe-6 operation.
M-FILTER DEACTIVATION	Virus	Escherichia coli phage (øX-174 ATCC 13706-B1)	99%	Japan Food Research Laboratories	Test Report No. 12014705001	The test piece impregnated with Escherichia coli phage was placed on the filter of the Air Conditioner indoor unit, and then nanoe-G was operated. After the test piece was collected, phage infectivity titer was determined. * test substance was placed on the 4 locations of the filter; upper/lower right and upper/lower left.	99% of deactivation after 2-hour Nanoe-G operation.
	VII US	Influenza (H1N1) 2009 Virus	Average 90% on filter (The percentage varies from 78.9% to 96.1% depending on its location)	Kitasato Research Center for Environmental Science	KRCES-Virus Test Report No. 24_0013	The test piece impregnated with Influenza [H1N1] 2009 Virus was placed on the filter of the Air Conditioner indoor unit, and then nanoe-G was operated. After the test piece was collected, virus infectivity titer was determined.  * test substance was placed on the 4 locations of the filter; upper/lower right and upper/lower left.	Average 90% deactivation after 2-hour nanoe-G operation. (The percentage varies from 78.9% to 96.1%, depending on its location on filter)

Remark: All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

P 9 %\*4

BACTERIA and VIRUSES

DEACTIVATES AVERAGE

INFLUENZA (H1N1) 2009 VIRUS



\*4 In-Filter Deactivation was certified by Japan Food Research Laboratories

• Test Report number : 12037932001 Bacteria : Staphylococcus aureus (NBRC 12732)

• Test Report number : 12014705001 Virus : Escherichia coli phage [GG-174 ATCC 13706-B1]

All results are based on specific testing conditions.
All tests are not demonstrated under actual usage situation.

In-Filter Deactivation was certified by Kitasato Research Center for Environmental Science

Test Report number : KRCES-Virus Test Report No. 24\_0013
 Virus : Influenza (H1N1) 2009 Virus

All results are based on specific testing conditions. All tests are not demonstrated under actual usage situation.

