

Panasonic



HIGH PERFORMANCE
Wall-mounted heat pumps multi-zone

UP TO
22
SEER2

UP TO
10.1
HSPF2

HEATING
UP TO
-20°C

10YR
WARRANTY

ClimaPure™ **XE**



INVERTER



Exclusive distributor in Quebec

DESCAIR

descair.ca



Integrated Wi-Fi



What is a heat pump?

A heat pump is an electrical device that extracts heat from one place and transfers it to another. It allows you to heat in winter and to cool in summer. Heat pumps transfer heat by circulating a substance called a refrigerant through a cycle of evaporation and condensation. A compressor pumps the refrigerant between two heat exchanger coils. In one coil, the refrigerant is evaporated at low pressure and absorbs heat from its surroundings. The refrigerant is then compressed en route to the other coil, where it condenses at high pressure. At this point, it releases the heat it absorbed earlier in the cycle.

The heat pump cycle is fully reversible, and it can provide year-round climate control for your home – heating in winter and cooling and dehumidifying in summer. Since the ground and air outside always contain some heat, a heat pump can supply heat to a house even on cold winter days. In fact, air at -18°C contains about 85% of the heat it contained at 21°C.

What is a SEER?

The seasonal energy efficiency ratio (SEER) measures the cooling efficiency of the heat pump over the entire cooling season. The SEER is based on a climate with an average summer temperature of 28°C. A higher SEER rating means greater energy efficiency for cooling.

What is a HSPF?

The heating seasonal performance factor (HSPF) is a measure of the total heat output in BTU of a heat pump over the entire heating season divided by the total energy in watt hours it uses during that time. Weather data characteristic of long-term climatic conditions are used to represent the heating season in calculating the HSPF. The higher the HSPF rating or a unit, the more energy efficient it is.

Source: Natural Resources Canada's Office of Energy Efficiency (2004)

INVERTER Technology

High efficiency operation

Panasonic Inverter technology provides optimum power control and extremely efficient operation by modulating the compressor capacity. The result is efficient and flexible operation using less electricity. With accumulated production of 200 million compressors, extremely high quality and reliability are proven.

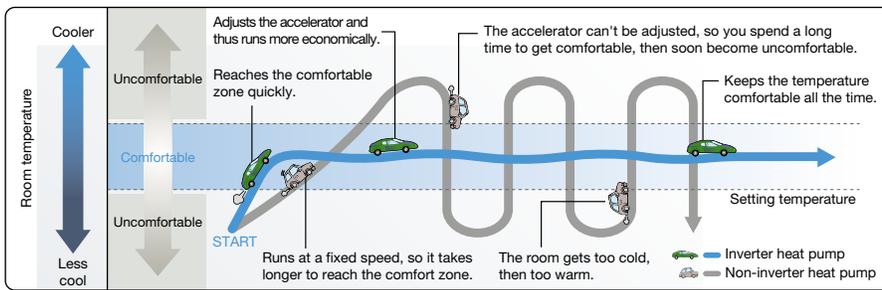
Panasonic Inverter heat pumps are designed to give you exceptional energy savings while ensuring you stay comfortable at all times.

Precise temperature control with a wide power output range enables an inverter heat pump to meet different room occupancy levels, providing constant comfort.

Higher cooling/heating power during the start-up period allows cooling/heating the room faster.

The indoor operating noise has been reduced to 5 dB as the inverter constantly varies its output power to enable more precise temperature control.

Advantages of Inverter technology Comparing inverter and non-inverter air conditioners to cars



*Image of output power fluctuation

What is nanoe™?

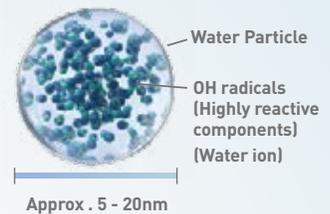
nano-technology + electric =



nanoe™ X is nano-sized electrostatic atomized water particles that are rich in OH radicals.

nanoe™ X is the next generation of nanoe™ technology and is generated from moisture in the air that contains highly reactive components known as hydroxyl (OH) radicals, which are effective at suppressing pollutants and odors.

4.8 trillion OH radicals / sec



How nanoe™ works?

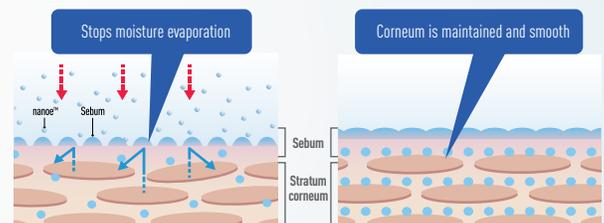
Deodorizes Odors



Inhibits Airborne and Adhered Pollutants



Helps maintain skin moisture

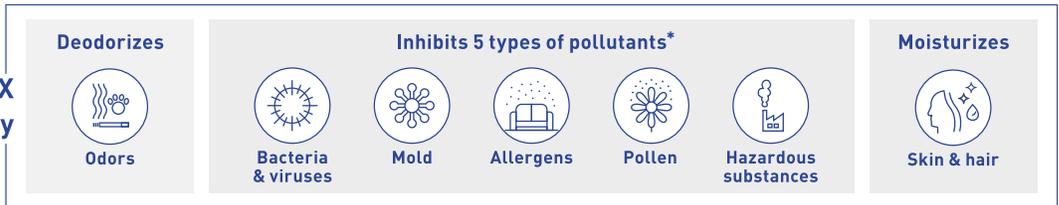


Using existing moisture already in the air, nanoe™ X hydrates the sebum (produced by sebaceous glands to lubricate the skin) on the skin to help prevent loss of moisture.

*Test Laboratory: FCG Research Institute Inc. Report no. 19104

nanoe™ X inhibits both airborne and adhered pollutants and odors in the home

7 effects of nanoe™ X air purification technology



*nanoe™ X reduces the concentration of select pollutants, mold, allergens, pollen, PM2.5, and odors and the growth of certain viruses and bacteria, but does not prevent them.

✓ Helps create an environment that's clean and safe for babies



Living room

The carpets where babies spend much of their time conceal a great deal of mold, bacteria, viruses and allergens deep in their fibers. nanoe™ X inhibits these pollutants, helping to make carpets cleaner and safer for babies.

✓ Makes homes more comfortable for families with pets



Mites and dander from pets are a major cause of allergies in the home. nanoe™ X not only effectively inhibits these allergens but also eliminates many odors that permeate mattresses, blankets and more.

✓ Keeps the living room fresh and inviting



Living room

The smell of unpleasant odors tends to permeate furniture and curtains over time. nanoe™ X inhibits odors, leaving the air in your living room fresh and inviting.

✓ Protects your valued clothing and other stored items



Bedroom/Closet

Air tends to become stale and humid inside closets, encouraging the growth of mold. nanoe™ X inhibits the growth of mold to help protect your clothing and other stored items.

✓ Inhibits harmful substances in PM2.5 brought in from outside



Entryways

Harmful substances in PM2.5 and pollen that are thought to cause asthma, bronchitis and other health issues tend to cling to your clothing and hair when you come in from outside. nanoe™ X breaks down and inhibits these substances.

✓ Moisturizes skin and hair for a little extra self-care



nanoe™ X helps keep your hair and skin moisturized while you sleep or spend time with your family. nanoe™ X hydrates the sebum on the skin to prevent the loss of moisture.

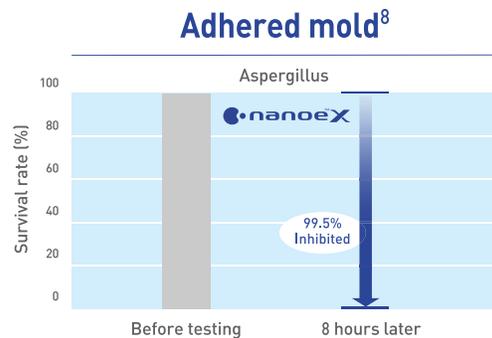
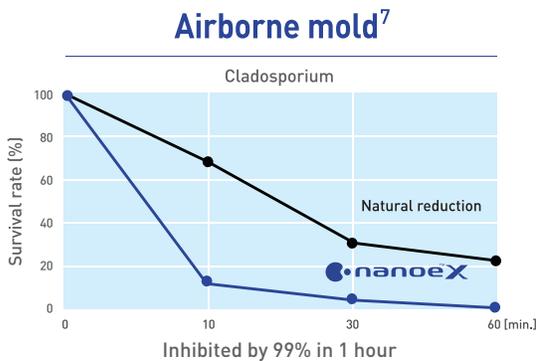
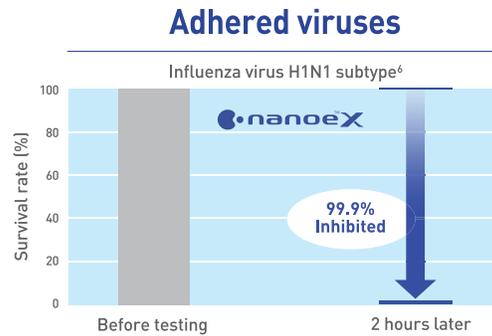
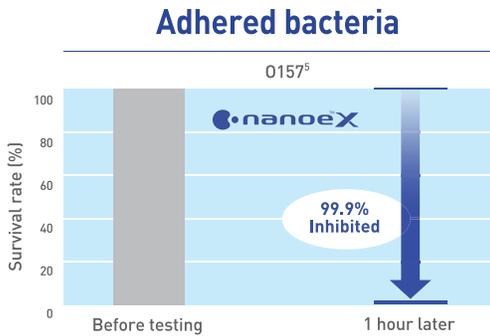
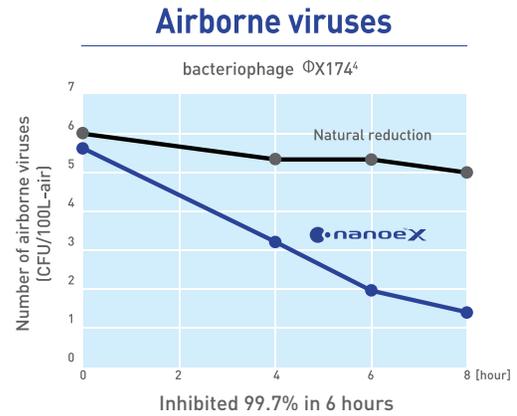
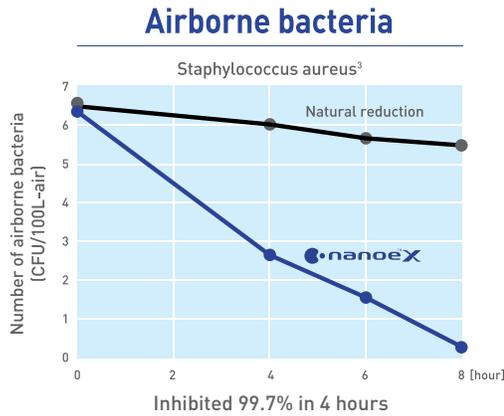
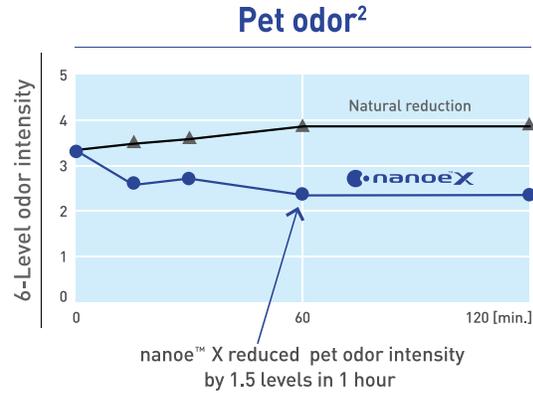
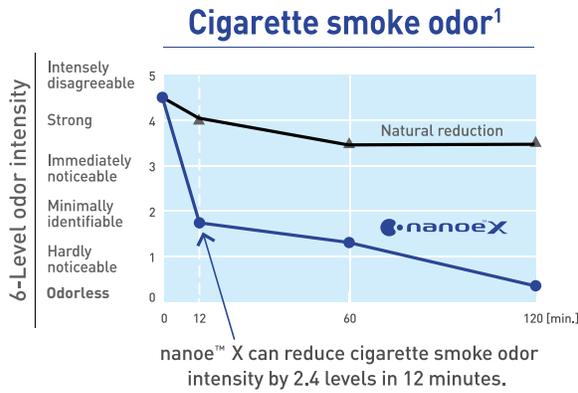


VERIFIED
ZERO OZONE
DOES NOT EMIT MORE THAN
0.005PPM AS TESTED
PER UL 867

Ozone concentration during the nanoe™ X generating mode has been verified by California Air Resources Board (CARB) and INTERTEK respectively per authorized testing standards.

- Standard value of California Air Resources Board (CARB): 0.05ppm or lower
- Standard value of INTERTEK "Verified Zero Ozone": 0.005ppm or lower

The Effectiveness of nanoe™ X Technology



*nanoe™ X reduces the concentration of select pollutants, mold, allergens, pollen, PM2.5, and odors and the growth of certain viruses and bacteria, but does not prevent them.

¹-Cigarette smoke odor- [Test org.] Panasonic Product Analysis Center [Test method] Verified using the six-level odor intensity scale method in an approximately 23m³ sized test room [Deodorization method] nanoe™ released [Test substance] Surface-attached cigarette smoke odor [Test result] Odor intensity reduced by 2.4 levels in 12mins (44433-160615-N04)

²-Pet odor->[Test org.] Panasonic Product Analysis Center [Test method] Verified using the six-level odor intensity scale method in an approximately 23m³ sized test room [Deodorization method] nanoe™ released [Test substance] Surface-attached pet odor [Test result] Odor intensity reduced by 1.5 levels in 1 hour (44433-160315-A34)

³-Airborne bacteria (Staphylococcus aureus)- [Test org.] Kitasato Research Center for Environmental Science [Test method] The number of bacteria is measured after direct exposure in an approximately 25m³ sized airtight test room [Inhibition method] nanoe™ released [Test substance] Airborne bacteria [Test result] Inhibited by at least 99.7% in 4 hours (24_0001_1)

⁴-Airborne virus (bacteriophage ΦX174)- [Test org.] Kitasato Research Center for Environmental Science [Test method] The number of virus is measured after direct exposure in an approximately 25m³ sized airtight test room [Inhibition method] nanoe™ released [Test substance] Airborne virus [Test result] Inhibited by at least 99.7% in 6 hours (24_0300_1)

⁵-Adhered bacteria (O157)- [Test org.] Japan Food Research Laboratories [Test method] Measured the number of bacteria adhered to a cloth in an approximately 45L sized airtight test room [Inhibition method] nanoe™ released [Test substance] Adhered bacteria [Test result] Inhibited by at least 99.99% in 1 hour (208120880_001)

⁶-Adhered virus (Influenza virus H1N1 subtype)- [Test org.] Kitasato Research Center for Environmental Science [Test method] Measured the number of virus adhered to a cloth in an approximately 1m³ sized airtight test room [Inhibition method] nanoe™ released [Test substance] Adhered virus [Test result] Inhibited by at least 99.9% in 2 hours (21_0084_1)

⁷-Airborne mold (Cladosporium)- [Test org.] Japan Food Research Laboratories [Test Method] Measured the number of mold altered in an approximately 23m³ sized test room [Inhibition method] nanoe™ released [Test substance] Airborne mold [Test result] Inhibited by at least 99% in 1 hour (205061541-001)

⁸-Adhered mold (Aspergillus)- [Test org.] Japan Food Research Laboratories [Test Method] Measured the mold adhered to a cloth [Inhibition method] nanoe™ released [Test substance] Adhered mold [Test result] Inhibited by at least 99.5% in 8 hours (11038081001-02)

Features



Purification system

Advanced maintenance-free nanoe™ X air and surface purification technology.



Integrated Wi-Fi

Control heating and cooling in your house has never been easier with the easy-to-use smartphone app *Panasonic Comfort Cloud*.



Room freeze protection

Room freeze protection mode helps prevent plumbing damage due to sub-freezing temperature. This mode automatically turns on the compressor for heat pump operation if the room temperature falls to about 7,8°C (46°F). This function may not be performed if the unit is not powered, or if the unit is unable to operate such as in protection mode. Please consult with the HVAC installers or professional for details.



Microprocessor controlled operation

Microprocessor control ensures that the temperature and humidity levels in the room are always comfortable.



Wireless remote control

Panasonic's infrared remote control with an easy-to-read LCD display gives the user the capability to adjust and set: temperature, sweep (louver control), fan speeds, timer and more, for complete automatic operation.



Dry mode

By coupling compressor and fan operation, intermittent operation can be precisely controlled according to room temperature, so that air is sufficiently dehumidified.



5 fan speeds and automatic fan operation

Convenient microprocessor control automatically adjusts fan speed to High, Medium or Low, according to room temperature to maintain a comfortable airflow throughout the room.



Louver control

Louver can be manually set to the desired angle by remote control.



Base pan heater

Base pan heater is included to prevent freezing of the outdoor unit during defrost.



Automatic restart function after power failure

This feature allows the system to automatically resume operation at its reset program, after power is restored from a power failure when the remote control is in the room.



Low ambient heating: -26,1°C (-15°F)

Heating capacity up to -26,1°C (-15°F) allows heating in extremely cold regions.



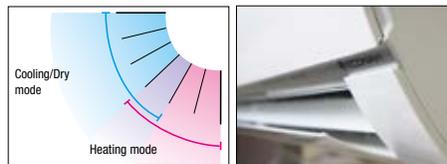
Self-diagnosing function

Unit is equipped with self-diagnosing function with remote control. This makes it easier to diagnose malfunctions, thus reducing service labor.



Air sweep control

The air sweep function moves the louver up and down in the air outlet, directing air in a "sweeping" motion around the room and providing comfort in every corner.



2 air guides to improve the air flow direction

Cooling mode



Cool air doesn't reach you directly; hands and feet won't be cold.

Heating mode



Warm feet and no direct breeze on your face; more comfort.



Automatic heating and cooling changeover

After setting the temperature and functions you desire, just relax. If the room temperature is higher than the set temperature, cooling operation begins. If the room temperature is lower than the set temperature, heating operation begins. During normal thermostat cycle operation, cooling and heating operations automatically change in accordance with set temperature, time and room temperature. (Single zone heat pump unit only)



Hot start heating system

Right from the start, air is warm and comfortable. The hot start heating system prevents any cold blasts at the beginning while the heat pump is warming up.



Auxiliary heat connector

The unit is equipped with an auxiliary heat connector for supplementary or emergency heating, including baseboard heater.



24-hour clock with ON/OFF program timer

The remote control allows you to set a wide variety of timer-based operations. Such functions include automatic ON/OFF with a timer setting, save time ON/OFF every day, ON timer, OFF timer and Combination timer.



R-410A

The unit runs with refrigerant type R-410A.



Anti-microbial filter

The anti-microbial filter by 3M is treated to inhibit the growth of mold and mildew, and helps create clean air.



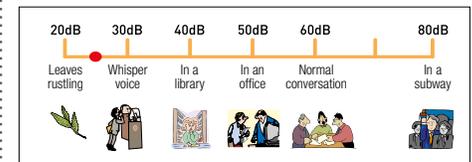
Electric refrigerant control valve

The circulation volume of the refrigerant is controlled by a pulse type electric control valve. In order to attain optimum efficiency, when the power is switched ON, the opening degree of the electric control valve is controlled between 90 and 480 steps.



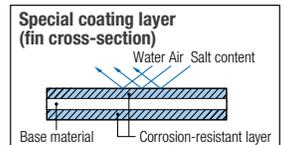
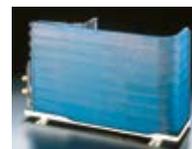
Quiet mode

Low fan speed for extra quiet operation.



Blue Fin Condensor

Condensers can take a beating from exposure to salty air, rain and other corrosive factors. Panasonic has extended the life of its condensers with an original anti-rust coating.



High performance heat pump – Multi-Zone

Panasonic

ClimaPure™ **XE**



Indoor unit
 CS-XE9WKUAW
 CS-XE12WKUAW
 CS-XE15WKUAW
 CS-XE18WKUAW



Wireless controller (included)



Wired controller CZ-RD516C-1 (optional)

Indoor unit model			CS-XE9WKUAW	CS-XE12WKUAW	CS-XE15WKUAW	CS-XE18WKUAW
Performance and electrical ratings						
Capacity	Cooling	BTU/hr.	9,000 (2,800 ~ 12,000)	11,500 (2,800 ~ 14,000)	14,300 (3,300 ~ 19,000)	17,200 (5,800 ~ 19,800)
	Heating	BTU/hr.	10,900 (3,000 ~ 18,000)	12,000 (3,000 ~ 23,000)	17,200 (3,340 ~ 24,000)	20,400 (5,800 ~ 30,000)
Moisture removal	High	Pt./hr.	1.3	2.5	4.0	3.6
Dry air flow	High	CFM	395	415	460	595
Alimentation électrique	V, Phase, Hz		230/208 V, 1 Ph, 60 Hz			
Running amps	Cooling	A	2.6 / 2.9	3.8 / 4.2	5.4 / 6.0	6.2 / 6.9
	Heating	A	3.6	4.2	6.6	8.70
Power input	Cooling	W	540 (150 ~ 850)	810 (150 ~ 1,500)	1,170 (250 ~ 1,900)	1,300 (430 ~ 1,600)
	Heating	W	670 (150 ~ 1,650)	800 (150 ~ 1,800)	1,260 (200 ~ 2,650)	1,630 (380 ~ 2,800)
Auxiliary heater connector			On/Off	On/Off	On/Off	On/Off
Operating sound level (Hi/Mid/Lo)	Cooling	dB(A)	42 / 25 / 20	45 / 28 / 20	45 / 37 / 34	47 / 39 / 36
	Heating	dB(A)	42 / 29 / 26	44 / 35 / 32	47 / 37 / 34	48 / 39 / 36
Refrigerant piping	Discharge/Suction	in	1/4" and 3/8"	1/4" and 1/2"	1/4" and 1/2"	1/4" and 1/2"
Dimensions and weight						
L x P x H		in	34-9/32 x 9-1/6 x 11-5/8	34-9/32 x 9-1/6 x 11-5/8	34-9/32 x 9-1/6 x 11-5/8	43-13/32 x 9-5/8 x 11-29/32
Net weight		lb	24.0	24.0	24.0	33.0



Outdoor unit model	CU-2E18SBU-5		CU-3E19RBU-5*		CU-4E24RBU-5		CU-5E36QBU-5		
	Cooling	Heating	Cooling	Heating	Cooling	Heating	Cooling	Heating	
Performance and electrical ratings									
Capacity	BTU/hr.	16,700 (7,200 ~ 20,000)	20,200 (7,200 ~ 24,600)	19,000 (6,100 ~ 24,800)	26,000 (5,500 ~ 28,400)	24,000 (10,200 ~ 31,400)	37,800 (14,300 ~ 48,500)	36,000 (9,900 ~ 39,000)	37,800 (11,600 ~ 49,500)
Dry air flow	High	CFM	1,447	1,447	1,634	1,963	2,330	2,512	2,475
Number of connectable indoor units		2	2-3	2-3	2-4	2-5	2-5	2-5	2-5
SEER / SEER2	Non-ducted	19.0 / 19.0	---	22.0 / 22.0	---	22.0 / 22.0	---	18.5 / 18.5	---
EER / EER2	Non-ducted	12.55 / 12.55	---	12.55 / 12.55	---	12.55 / 12.55	---	9.60 / 9.60	---
HSPF / HSPF2 (Region IV)	Non-ducted	---	10.0 / 9.1	---	10.5 / 10.1	---	10.0 / 9.1	---	10.0 / 9.1
COP	W/W	---	3.38 (5.28 ~ 3.30)	---	3.70 (5.00 ~ 3.61)	---	3.66 (6.00 ~ 3.24)	---	3.82 (6.42 ~ 3.42)
Temperature	°C	-10.0°C ~ 46.0°C	-20.56°C ~ 24.0°C	-10.0°C ~ 46.0°C	-20.56°C ~ 24.0°C	-10.0°C ~ 46.0°C	-20.56°C ~ 24.0°C	-10.0°C ~ 46.0°C	-20.56°C ~ 24.0°C
	°F	14.0°F ~ 114.8°F	-5.0°F ~ 75.2°F	14.0°F ~ 114.8°F	-5.0°F ~ 75.2°F	14.0°F ~ 114.8°F	-5.0°F ~ 75.2°F	14.0°F ~ 114.8°F	-5.0°F ~ 75.2°F
Power supply	V, Phase, Hz	230/208 V, 1 Ph, 60 Hz		230/208 V, 1 Ph, 60 Hz		230/208 V, 1 Ph, 60 Hz		230/208 V, 1 Ph, 60 Hz	
Running amps	A	6.0 / 6.6	7.8 / 8.5	6.7 / 7.4	9.1 / 10.1	8.9 / 9.9	13.9 / 15.3	17.2 / 19.0	13.4 / 14.8
Power input	W	1,330 (360 ~ 1,690)	1,750 (400 ~ 2,180)	1,510 (360 ~ 2,420)	2,060 (320 ~ 2,300)	1,910 (530 ~ 2,870)	3,030 (700 ~ 4,380)	3,750 (550 ~ 3,860)	2,900 (530 ~ 4,240)
MCA/MOP	A	20/25		20/30		30/45		30/45	
Features									
Controls		Microprocessor		Microprocessor		Microprocessor		Microprocessor	
Fan speed		Automatic		Automatic		Automatic		Automatic	
Compressor		DC Inverter		DC Inverter		DC Inverter		DC Inverter	
Refrigerant / Amount charged at shipment	oz	R-410A / 78.7 oz		R-410A / 93.2 oz		R-410A / 120.0 oz		R-410A / 120.0 oz	
Refrigerant control		Electric expansion valve		Electric expansion valve		Electric expansion valve		Electric expansion valve	
Noise level	High	db(A)	48	49	50	52	55	55	55
Refrigerant piping	Type	Flare		Flare		Flare		Flare	
Max. allowable tubing length for all units and min./max. per unit	ft.	Max. 164' (Min. 9.8' / Max. 82.0' per unit) with additional refrigerant		Max. 164' (Min. 9.8' / Max. 82.0' per unit) with additional refrigerant		Max. 229.6' (Min. 9.8' / Max. 82.0' per unit) with additional refrigerant		Max. 262' (Min. 9.8' / Max. 82.0' per unit) with additional refrigerant	
Tube diameter	Discharge	in.	1/4"	1/4" x 3	1/4" x 3	1/4" x 4	1/4" x 5	1/4" x 5	1/4" x 5
	Suction	in.	3/8"	3/8" x 3	3/8" x 3	3/8" x 4	3/8" x 5	3/8" x 5	3/8" x 5
Precharged	ft.	65.6		98.4		147.6		147.6	
Additional charge for each ft.	oz/ft.	0.2		0.2		0.2		0.2	
Dimensions and weight									
L x P x H		in.	34-15/32 + 3-3/4 x 12-5/8 x 31-5/16	34-15/32 + 3-3/4 x 12-5/8 x 31-5/16	37-1/32 x 13-13/32 x 39-11/32	37-1/32 x 13-13/32 x 39-11/32	37-1/32 x 13-13/32 x 39-11/32	37-1/32 x 13-13/32 x 39-11/32	37-1/32 x 13-13/32 x 39-11/32
Net weight		lb.	157	159	183	183	183	183	183

* NEEP for non-ducted match-up

All multi-zone outdoor units operate within a Minimum – Maximum capacity range. Combination of indoor units that are not within the Min. – Max capacity range will generate an H12 error code and the system will not operate.

How to select capacity and combinations of indoor units

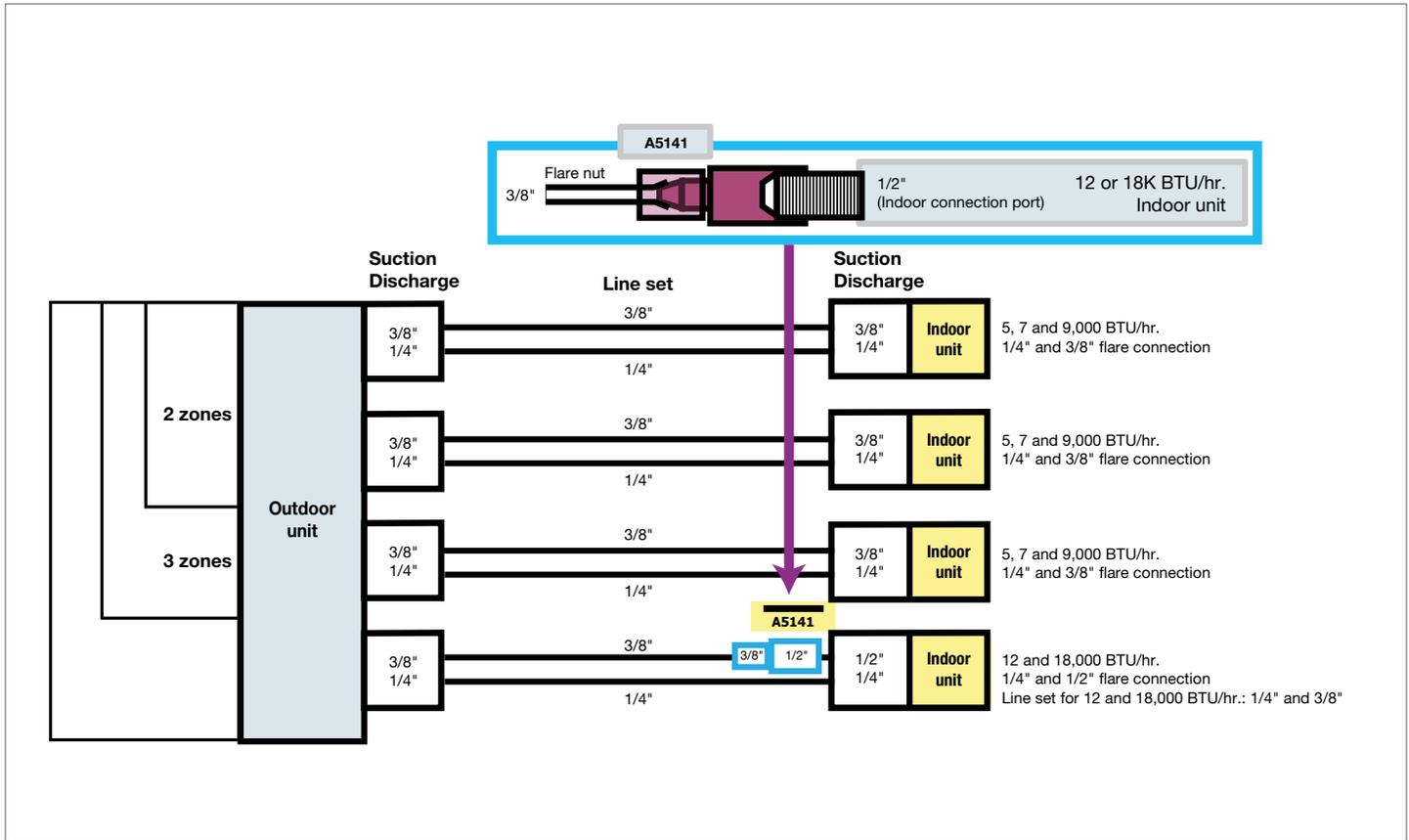
- Step 2a.** Select the indoor unit and number of units.
- Step 2b.** Multiply the number of units by cooling demand to calculate total demand for each model.
*Always use cooling demand to determine Min. – Max.
- Step 2c.** Calculate the total number of indoor units and their total demand.
- Step 2d.** Select an outdoor unit capacity range that satisfies the total indoor demand.

Note: If total indoor units load exceeds nominal capacity of outdoor unit, the practical output capacity of every indoor unit will be correspondingly attenuated. This situation is more noticeable during heating mode.

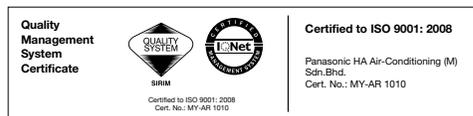
Rules: Outdoor unit capacity x 0.5 ≤ Indoor units total capacity ≤ Outdoor unit capacity x 1.33

System demand		System capacity	Indoor combinations			
		Unit demand Cooling	Number of indoor units needed (Step 2a.)	Cooling capacity (BTU)	Total capacity (BTU) (Step 2b.)	
Indoor units						
	CS-XE9WKUAW	8,600	x	8,600	=	
	CS-XE12WKUAW	10,900	x	10,900	=	
	CS-XE15WKUAW	13,650	x	13,650	=	
	CS-XE18WKUAW	17,100	x	17,100	=	
Total combined indoor unit capacity (Step 2c.)						

System capacity	System supply Cooling	Total number of indoor units	Min./Max. Indoor connected cooling capacity range (BTU)	Select condensers within min./max. range (Step 2d.)
Outdoor units				
	CU-2E18SBU-5	16,700	2 zones	7,200 ~ 20,000
	CU-3E19RBU-5	19,000	2 - 3 zones	15,300 ~ 30,600
	CU-4E24RBU-5	24,000	2 - 4 zones	15,300 ~ 46,400
	CU-5E36QBU-5	36,000	2 - 5 zones	15,300 ~ 59,500



Use of the AHRI Certified™ mark indicates a manufacturer's participation in the certification program. For verification of certification for individual products, go to www.ahridirectory.org



Serving the North American air conditioning market since 1983

Exclusive distributor in Quebec



*Panasonic basic warranty (residential): 10 years compressor and 10 years parts. 10 years labor warranty is offered by Descair in Quebec only.

Because its products are subject to continuous improvements, Panasonic reserves the right to modify product design and specifications without notice and without incurring any obligations.

WARNING 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.