# CHU/CU Series



Powerful Cooling & Heating For Year-Round Comfort



- Energy Star Cold Climate Certified
- Available in Single & Multi Zone Variant
- Equipped with Motion Sensor (CHU Variant)
- 50ft long "Coanda Airflow"
- Spot Air Function (CHU Variant)
- Multi Space Function
- Safe "Hot Gas Pipe" de-icing system













# Long History of HVAC Product Development

Ever since developing our first air conditioner in **1958**, we have been committed to creating original products and delivering the best solutions to enhance our customers' quality of life. After introducing **Airest**, the world's first mini-split system equipped with certified MERV 14 filters, we continue to work tirelessly to develop the next generation of air conditioners and heat pumps that meet evolving needs and set new standards around the world.



# **Comfort Airflow Technology**

Throughout the development of our products and evolving customer needs, we have engineered key airflow technologies integrated across various models. These include **Coanda Airflow Technology**, delivering air up to 50 feet to cover wide areas; the **Multi Space** Function, which maintains consistent airflow across connected spaces like living rooms and hallways; and the **Spot Air** Function, designed to direct cool or warm air precisely where it's needed for targeted comfort.



# Smart and Functional Unit Design

Sharp combines advanced airflow technology with smart, functional design that seamlessly blends into any room. Featuring clean lines, subtle curves, and a minimalist profile, each unit complements a variety of interiors while showcasing quality and durability. This thoughtful design ensures efficient performance and natural integration, enhancing comfort both visually and physically in your living space.



# Easy Maintenance & Troubleshooting

Sharp HVAC systems are designed with ease of maintenance in mind, not only for homeowners but also for technicians. With built-in system indicators and self-diagnostic capabilities, the unit can detect and display specific error codes that help identify problems quickly. These features significantly reduce troubleshooting time, allowing technicians to resolve issues efficiently and helping users avoid prolonged discomfort or unnecessary repairs.



## Wide-Area Coanda Airflow

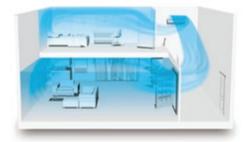
With **Coanda Airflow technology**, the CHU/CU heat pump delivers airflow as far as **50 ft** across large spaces. During cooling, the louvers face upward to guide air along the ceiling, while in heating mode, the louvers face downward to direct warm air along the floor. This technology distributes air gently without blowing it directly onto your body.



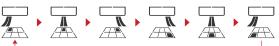
# **Expand Comfort with Multi Space**

The **Multi Space** function enables one indoor unit to extend airflow beyond the main room, helping to deliver comfort to nearby connected spaces such as living rooms and hallways. Depending on the room layout and structure, it can gently adjust airflow direction and fan speed to reach adjacent areas. This feature is especially useful in open layouts or homes with limited installation space, as it may reduce the need for additional units while still supporting a comfortable indoor environment and energy efficiency.









# **Targeted Airflow by Spot Air**

The **Spot Air** function provides targeted airflow to a selected area within the room, ensuring efficient cooling or heating exactly where it's needed. The room is divided into six zones, and users can easily choose which zone to condition using the remote control, allowing for faster temperature adjustments and personalized comfort. (CHU Series Only)

# Hassle-Free Cleaning Fresh Air Everyday

# Easy Way to Clean

The new CHU/CU heat pump is designed with easy cleaning in mind, so you can keep it in top condition without hassle. In many conventional heat pumps, removing the air filter can be a hassle, often requiring the removal of several other parts first. With the CHU/CU, the filter can be taken out in seconds and cleaned with a simple hand vacuum. You can also wipe down the indoor unit with a soft cloth to keep it looking fresh and dust-free. Thanks to these thoughtful design details, regular maintenance is quick, convenient, and stress-free, ensuring you enjoy clean, comfortable air all year round.





# **AFTER CARE Feature**

With the **AFTER CARE** feature, keeping your unit in excellent condition is effortless. After each COOL or DRY operation, the indoor unit automatically uses fan mode to gently dry its interior, helping to reduce odors and prevent mold growth. By minimizing the need for frequent manual cleaning, AFTER CARE ensures a healthier, fresher environment while giving you peace of mind that your air conditioner is always operating at its best.

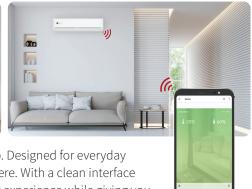


## **SHARP AIR Mobile App**









Effortlessly control your heat pump with your smartphone using the SHARP AIR app. Designed for everyday convenience, the app keeps you connected to your heat pump anytime and anywhere. With a clean interface and smart connectivity, SHARP AIR supports a more comfortable and efficient living experience while giving you greater control from the palm of your hand.



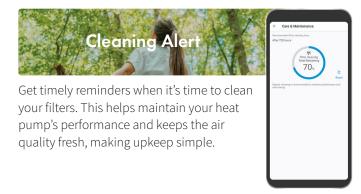
Stay effortlessly connected to your heat pump even when you're away. Switch to your desired mode and change the temperature to get your home ready before you arrive so it's always comfortable when you walk in.















# **AHA! Air History Analyzer**

Heat Pump Maintenance Companion App

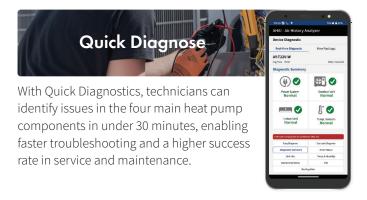
With the Air History Analyzer, technicians can confidently and efficiently pinpoint errors and malfunctions on Sharp-branded heat pumps, delivering faster, more precise service.

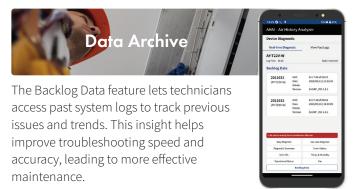
Customers can rest assured their heat pump will be back to peak performance in no time.

Smartphone with Android OS are needed











## Other Features



**Gas Leak Detection Tool** 



Firmware Update Tool

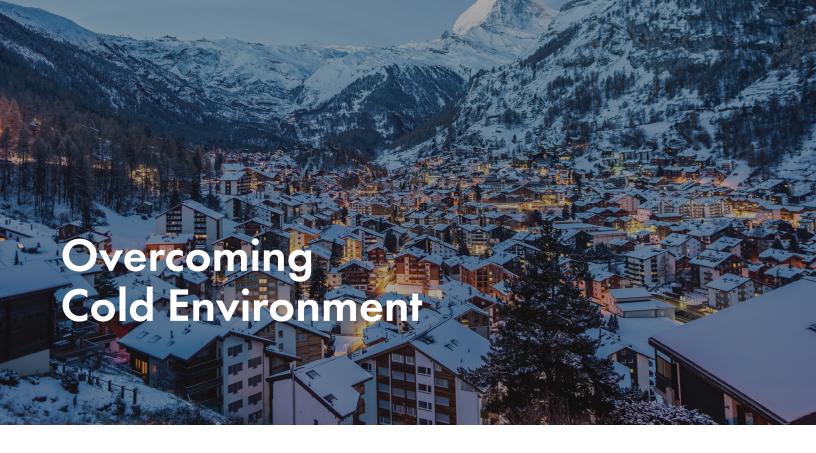


**Troubleshooting Guide** 

This software is exclusively distributed to Contractors in partnership to Sharp Corporation.

For further question and availability of this app please contact your local Sharp representative or use the contact below.

Sharp Canada: aaaa@aaaa.mail.com



# **Tested for Harsh Cold Climate**

When expanding beyond the Japanese market, we developed specialized versions of our heat pump products to meet the demands of regions known for their harsh winters. We entered Northern Europe in 1995, followed by Canada in 2012. With over 30 years of experience designing heat pump units for extreme climates, we ensure every product undergoes rigorous testing to guarantee stable performance. Today, our heat pumps operate reliably even in temperatures as low as -22°F.



Figure 1: The outdoor unit tested can withstand -22°F cold environment



# **Cold-Resistant Technology**

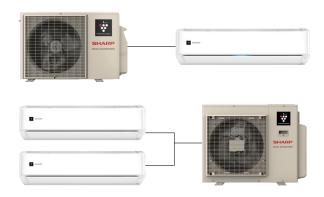
Built for reliability, the unit delivers stable performance in extreme temperatures, from 115°F for cooling to -22°F for heating. The outdoor unit is equipped with Sharp's patented **Hot Gas Pipe** which utilizes unused heat generated from heating to keep the outdoor unit from freezing. Because it does not require a separate electric heat source, this system is safe and energy-efficient.



# Motion Sensor Technology

The built-in Motion Sensor intelligently detects human activity in the room and adjusts operation for greater comfort and efficiency. When no movement is detected for a certain period of time, the unit automatically reduces cooling or heating to save energy. As soon as someone enters the room, it quickly returns to the original settings, ensuring the space is immediately brought back to your preferred comfort level. With this smart function, you enjoy consistent comfort while reducing unnecessary energy consumption. (CHU Series Only)





# Single & Multi-Zone Configuration

Our system offers both single-zone and multi-zone configurations, providing flexibility to suit different needs. A single-zone setup works best for efficiently conditioning one room or area, while the multi-zone option connects up to three indoor units to a single outdoor unit. This adaptable design allows you to create customized comfort solutions that align seamlessly with various building layouts, from homes to offices and commercial spaces.

# **Comes in White & Black**







#### Indoor Unit



AY-XP12CHU

AY-XP18CHU

Motion Sensor



AY-XP12CHU-B



Motion Sensor



Features

LONG

**Multi Space** 

Coanda Airflow

Direct warm air downward and cool air upward, no

direct wind to your face.





#### **Spot Air**

Airflow toward your desired spot saves total energy consumption



4-way Auto Louver Automatic vertical and horizontal airflow is



#### Outdoor Unit







Remote Control

#### 50°F (10°C) Function

Keeps room temperature at 50°F (10°C) to prevent freezing of the room when you are away from home for a long time



#### **Full Power Mode**

Air conditioner works at maximum power for rapid room cooling and heating



#### **Auto Restart**

Automatically restart with the same setting as before the power was cut.



#### Eco Mode

Air conditioner operates with lower power consumption than usual in this mode.



#### After Care

Dries out the inside of the unit to reduce the chance of mold growth and odor



#### **OD Slient**

Keeps down the operation sound of the outdoor unit.





#### **Hot Gas Pipe**





AE-X12CHU



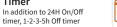






#### Timer

allow you to turn off the unit at your desired time easily.





#### Utilize unused heat generated from heating to keep the outdoor unit from freezing.

#### Specifications < Single Zone Model >

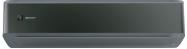
		Indoor Unit	Outdoor Unit	Indoor Unit	Outdoor Unit	
		AY-XP12CHU AY-XP12CHU-B	AE-X12CHU	AY-XP18CHU	AE-X18CHU	
AHRI N	umber	217512736 (AY-XP12CHU)	217512736 (AY-XP12CHU)   217512733 (AY-XP12CHU-B)		217508925	
Rated coolir	ng capacity	12,000 (3,5	00 - 14,000)	18,000 (6,000 - 21,600)		
Rated heatin	ng (federal)	16,000 (3,1	00 - 22,850)	21,600 (5,50	0 - 30,000)	
Rated heating a	at 17°F (-8.3°C)	18,	900	22,600		
	at 5°F (-15°C)	16,	000	19,5	600	
	at -4°F (-20°C)	13,	800	17,1	.00	
Max heating capacity	at -13°F (-25°C)	11,	600	14,8	300	
	at -17°F (-27°C)	11,	200	12,7	00	
	at -22°F (-30°C)	9,7	700	11,8	300	
EE	R2	16	5.0	13.	.0	
SEER/S	SEER2	25.0 ,	/ 25.0	24.0 /	25.0	
HSPF/HS	SPF2 (IV)	12.0 ,	/ 11.0	13.0 /	11.5	
HSPF/HS	SPF2 (V)	9.6	9.6/9.0			
COP at 5°	F (-15°C)	2	.1	2.2		
Powers	Supply	208 / 230V, 1-Phase, 60Hz		208 / 230V, 1-Phase, 60Hz		
Max Fuse	Size (A)	20A		25A		
	Cooling (IDU)	43 / 40 / 36 / 28 / 24		45 / 43 / 38	3/31/28	
Sound Pressure (dB)	Cooling (ODU)	49		52	2	
Soulia Flessure (db)	Heating (IDU)	44 / 40 / 3	5 / 29 / 22	49 / 47 / 41	1/31/25	
	Heating (ODU)	5	0	52	2	
Airflow Rate (cfm)	Cooling	597 / 519 / 40	03 / 290 / 212	636 / 597 / 48	0 / 328 / 251	
Airitow Rate (Cilli)	Heating	636 / 558 / 46	66 / 374 / 212	752 / 713 / 55	8 / 403 / 290	
Operating Range	Cooling	14 to 115°F	(-10 to 46°C)	14 to 115°F (-	-10 to 46°C)	
Operating Name	Heating	-22 to 75°F (	(-30 to 24°C)	-22 to 75°F (-	-30 to 24°C)	
Pipe dia	ameter	1/4	x 3/8	1/4 x	3/8	
Refrig		R:	32	R3	2	
Refrigerant v	olume oz (g)	36 (1	.020)	49 (13	390)	
Pipe leng		10 (3) -	25 (7.6)	10 (3) - 2	25 (7.6)	
w/ add. re	frigerant	25 (7.6)	- 66 (20)	25 (7.6) -	66 (20)	
Max height dif	ference ft (m)	33	(10)	33 (1	10)	
Add charge	oz/ft (g/m)	0.16	(15)	0.16	(15)	

#### Measurements

ricusus cinerius							
		AY-XP12CHU AY-XP12CHU-B	AE-X12CHU	AY-XP18CHU	AE-X18CHU		
	Width in (mm)	41 27/64 (1052)	30 23/32 (780)	41 27/64 (1052)	33 15/32 (850)		
Unit Dimension	Height in (mm)	12 7/16 (316)	21 1/4 (540)	12 7/16 (316)	27 15/16 (710)		
	Depth in (mm)	9 51/64 (249)	10 19/32 (269)	9 51/64 (249)	13 (330)		
Net Weigh	nt lbs (kg)	31 (14)	67 (30)	31 (14)	95 (43)		
	Width in (mm)	43 13/16 (1113)	36 5/16 (922)	43 13/16 (1113)	38 11/32 (974)		
Package Dimensions	Height in (mm)	12 23/32 (323)	23 3/4 (603)	12 23/32 (323)	30 13/16 (783)		
	Depth in (mm)	15 5/16 (389)	15 15/32 (393)	15 5/16 (389)	16 31/32 (431)		
Gross Weight lbs (kg)		35 (16)	73 (33)	35 (16)	104 (47)		

#### Indoor Unit





AY-XP15CU AY-XP24CU

AY-XP15CU-B

#### Outdoor Unit



AE-X15CU











AE-X24CU

Remote Control

#### Features



**10**°

**Ø**ECO

## Coanda Airflow

Direct warm air downward and cool air upward, no direct wind to your face.

50°F (10°C) Function

Keeps room temperature at 50°F (10°C) to prevent

freezing of the room when you are away from home for a long time



#### Multi Space

Circulate the conditioned air in order to balance the room temperature in adjacent rooms.



2-way Auto Louver Automatic vertical airflow is available.

#### **Full Power Mode** FULL POWER

Eco Mode

**OD Slient** 

Air conditioner works at maximum power for rapid room cooling and heating

Air conditioner operates with

lower power consumption than usual in this mode.

Keeps down the operation sound of the outdoor unit.



#### **Auto Restart**

Automatically restart with the same setting as before the power was cut.



#### **After Care**

Dries out the inside of the unit to reduce the chance of mold growth and odor



In addition to 24H On/Off timer, 1-2-3-5h Off timer allow you to turn off the unit at your desired time easily.



#### **Hot Gas Pipe**

Utilize unused heat generated



from heating to keep the outdoor unit from freezing.

#### Specifications < Single Zone Model >

		Indoor Unit	Outdoor Unit	Indoor Unit	Outdoor Unit		
		AY-XP15CU AY-XP15CU-B	AE-X15CU	AY-XP24CU	AE-X24CU		
AHRI N	umber	217512734 (AY-XP15CU)	217508926 (AY-XP15CU-B)	217508895			
Rated coolii	ng capacity	15,000 (5,0	00 - 17,000)	22,000 (6,000 - 24,000)			
Rated heati	ng (federal)	18,000 (4,5	18,000 (4,500 - 21,800)		00 - 27,100)		
Rated heating a	at 17°F (-8.3°C)	18,	100	22,4	100		
	at 5°F (-15°C)	15,	300	19,000			
	at -4°F (-20°C)	13,	200	16,400			
Max heating capacity	at -13°F (-25°C)	11,	100	13,9	900		
	at -17°F (-27°C)	10,	100	12,3	300		
	at -22°F (-30°C)	8,9	900	10,500			
EE	R2	13	3.4	10	.0		
SEER/S	SEER2	24.0	/ 24.0	19.0 /	22.0		
HSPF/HS	SPF2 (IV)	11.8	/ 11.0	12.3 /	11.0		
HSPF/HS	SPF2 (V)		/ 8.7	9.6 /	8.5		
COP at 5°	, ,	2	.1	2.	2		
Power			208 / 230V, 1-Phase, 60Hz		208 / 230V, 1-Phase, 60Hz		
Max Fuse			20A		A		
	Cooling (IDU)	1 1	8/30/26	47 / 45 / 40			
Sound Pressure (dB)	Cooling (ODU)		9	5:			
oodiid i ressare (as)	Heating (IDU)		6/30/23				
	Heating (ODU)		0				
Airflow Rate (cfm)	Cooling	636 / 558 / 4-	41 / 328 / 251	674 / 636 / 51	9 / 367 / 290		
7 iii Novi Nate (ciiii)	Heating	674 / 597 / 50	05 / 413 / 251	49/47/41/31/25 54 674/636/519/367/290 752/713/558/403/290			
Operating Range	Cooling	14 to 115°F	, ,	14 to 115°F (-10 to 46°C)			
	Heating	-22 to 75°F	(-30 to 24°C)	-22 to 75°F (-	-30 to 24°C)		
Pipe Dia		-	x 3/8	1/4 x			
Refrig		R	32	R3	2		
Refrigerant volume oz (g)		36 (1		49 (1	390)		
Pipe leng		10 (3) -	25 (7.6)	10 (3) - 2	25 (7.6)		
w/ add. re		25 (7.6)	- 66 (20)	25 (7.6) -	66 (20)		
Max height dif		33	(10)	33 (	10)		
Add charge	oz/ft (g/m)	0.16	(15)	0.16	(15)		

#### Measurements

measurements					
		AY-XP15CU AY-XP15CU-B	AE-X15CU	AY-XP24CU	AE-X24CU
	Width in (mm)	41 27/64 (1052)	30 23/32 (780)	41 27/64 (1052)	33 15/32 (850)
Unit Dimension	Height in (mm)	12 7/16 (316)	21 1/4 (540)	12 7/16 (316)	27 15/16 (710)
	Depth in (mm)	9 51/64 (249)	10 19/32 (269)	9 51/64 (249)	13 (330)
Net Weigh	nt lbs (kg)	31 (14)	67 (30)	31 (14)	95 (43)
	Width in (mm)	43 13/16 (1113)	36 5/16 (922)	43 13/16 (1113)	38 11/32 (974)
Package Dimensions	Height in (mm)	12 23/32 (323)	23 3/4 (603)	12 23/32 (323)	30 13/16 (783)
	Depth in (mm)	15 5/16 (389)	15 15/32 (389)	15 5/16 (393)	16 31/32 (431)
Gross Weight lbs (kg)		35 (16)	73 (33)	35 (16)	104 (47)

# Indoor Unit Outdoor Unit AE-X12CU ₩ SHARP <Single Zone> **撇-17°F** AY-XPC18CU

















Auto Restart

**Ø**ECO Eco Mode

Airflow

Features



After Care

Connectable to up to 3 Indoor Units



Function



Auto Louver



Full Power

Mode





AY-XPC9CU I AY-XPC12CU











**Specifications** 



**Combination Table** 

< Indoor Unit Combination for AE-X3M24BU Outdoor Unit >

1 <sup>st</sup> IDU	9,000	9,000	9,000	12,000	9,000	12,000	18,000
2 <sup>nd</sup> IDU	9,000	9,000	12,000	12,000	18,000	18,000	18,000
3 <sup>rd</sup> IDU	9,000	12,000	12,000	12,000	_	_	_

— : no unit is connected

#### < Single Zone Model >

#### < Single Zone Model >

< Multi Zone Model >

< Other IDU combination with AE-X3M24CU is available>

		Indoor Unit	Outdoor Unit	Indoor Unit	Outdoor Unit	Indoor Unit	Outdoor Unit
		AY-XPC12CU	AE-X12CU	AY-XPC18CU AY-XPC18CU-B	AE-X18CU	AY-XPC12CU (3 unit)	AE-X3M24CU
AHRI N	umber	2175	12740	217508915 (AY-XPC18CU)	217508914(AY-XPC18CU-B)	21751	2785
Rated cooli	ng capacity	12,000 (2,8	(00 - 13,600)	18,000 (6,000 - 21,600)		24,000 (5,50	0 - 27,000)
Rated heati	ng (federal)	14,000 (3,2	00 - 19,000)	21,600 (5,5	00 - 27,000)	26,600 (8,80	0 - 30,000)
Rated heating a	at 17°F (-8.3°C)	15,	000	22,	400	25,0	00
	at 5°F (-15°C)	12,	,700	19,	000	21,2	00
	at -4°F (-20°C)	10,	,700	15,	000	18,6	00
Max heating capacity	at -13°F (-25°C)	9,0	000	12,	000	15,7	00
	at -17°F (-27°C)	8,0	000	11,	500	14,6	00
	at -22°F (-30°C)			9,2	200	13,0	00
EE	R2	11	2.5	13	3.0	14	0
SEER/S	SEER2	21.0	/ 22.0	24.0	/ 24.0	25.0 /	24.0
HSPF/HS	SPF2 (IV)	12.5	/ 11.0	13.0	/ 11.0	12.0 /	11.5
HSPF/HS	SPF2 (V)	9.6	/ 9.0	10.0	/ 9.0	9.7 /	9.0
COP at 5°	F (-15°C)	2	1	2	.2	2.	3
Power:	Supply	208 / 230V, 1	-Phase, 60Hz	208 / 230V, 1	-Phase, 60Hz	208 / 230V, 1-	Phase, 60Hz
Max Fuse	e Size (A)	1	5A	25A		25	A
	Cooling (IDU)	42 / 39 / 34 / 27 / 23		45 / 43 / 3	8/31/28	42 / 39 / 34	1/27/23
Sound Pressure (dB)	Cooling (ODU)	49		5	2	52	2
Sound Flessure (ub)	Heating (IDU)	43 / 40 / 3	35 / 28 / 23	49 / 47 / 41 / 31 / 25		43 / 40 / 35	5/28/33
	Heating (ODU)	5	50	5	2	AY-XPC12CU (3 unit)  21751 24,000 (5,50 26,600 (8,80 25,0 21,2 18,6 15,7 14,6 13,0 14 25.0,0 9.7./ 2. 208 / 230V, 1- 25 42 / 39 / 3- 55 43 / 40 / 33 438 / 385 / 30 438 / 385 / 31 14 to 115°F ( -22 to 75°F ( 1/4 x 3 R3 77.6 (2 10 (3) - 82(25) IDU/IDU 33 (10),	3
Airflow Rate (cfm)	Cooling	438 / 385 / 3	07 / 219 / 145	636 / 597 / 4	80 / 328 / 251		7 / 219 / 145
All flow Rate (Cilli)	Heating	438 / 385 / 3	18 / 254 / 145	752 / 713 / 5	58 / 403 / 290		8 / 254 / 145
Operating Range	Cooling	14 to 115°F	(-10 to 46°C)	14 to 115°F	(-10 to 46°C)	14 to 115°F (	-10 to 46°C)
Operating Kange	Heating	-17 to 75°F	(-27 to 24°C)	-22 to 75°F	(-30 to 24°C)	-22 to 75°F (	30 to 24°C)
Pipe dia	ameter	1/4	x 3/8	1/4:	x 3/8	1/4 x 3	/8 x 3
Refrig	erant	R	32	R	32	R3	2
Refrigerant	volume (g)	33.2	(940)	49 (1	1390)	77.6 (2200)	
Pipe leng	gth ft (m)	10 (3) -	25 (7.6)	10 (3) -	25 (7.6)	10 (3) -	98 (30)
w/ add. re	efrigerant	25 (7.6)	- 66 (20)	25 (7.6)	- 66 (20)	per IDU 10(3) - 82(25)	total 30(9) - 230(70)
Max height dif	ference ft (m)	33	(10)	33	(10)	IDU/IDU 33 (10),	DU/ODU 49(15)
Add charge	oz/ft (g/m)	0.16	5 (15)	0.16	(15)	0.11	(10)

#### Measurements

measurements							
		AY-XPC12CU	AE-X12CU	AY-XPC18CU AY-XPC18CU-B	AE-X18CU	AY-XPC9CU	AE-X3M24CU
	Width in (mm)	39 39/64 (879)	30 23/32 (780)	41 27/64 (1052)	33 15/32 (850)	34 39/64 (879)	33 15/32 (850)
Unit Dimension	Height in (mm)	11 3/8 (289)	21 1/4 (540)	12 7/16 (316)	27 15/16 (710)	11 3/8 (289)	27 15/16 (710)
	Depth in (mm)	9 1/64 (229t)	10 19/32 (269)	9 51/64 (249)	13 (330)	9 1/64 (229)	13 (330)
Net Weigh	nt lbs (kg)	22 (10)	67 (30)	31 (14)	95 (43)	22 (10)	115 (52)
Package Dimensions	Width in (mm)	37 3/32 (942)	36 5/16 (922)	43 13/16 (1113)	38 11/32 (974)	37 3/32 (942)	38 11/32 (974)
	Height in (mm)	11 3/32 (282)	23 3/4 (603)	12 23/32 (323)	30 13/16 (783)	11 3/32 (282)	30 13/16 (783)
	Depth in (mm)	13 15/32 (342)	15 15/32 (393)	15 5/16 (389)	16 31/32 (431)	13 15/32 (342)	16 31/32 (431)
Gross Weight lbs (kg)		24 (11)	71 (32)	35 (16)	104 (47)	24 (11)	126 (57)



Effective Date: January 2026

Version: MNSPLT 4.0.1

- Please read the Installation Manual carefully before installing the unit, and the Operating Manual before using it.
- The content of this catalogue are accurate as of January 2026.
- Due to printing paper, actual colours may vary slightly from those shown.
- All graphics are provided solely for the purpose of Illustrating a point.



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