AIRSYS
Balance the Environment



COM4T

Heating and Cooling Solutions for the
Modular Building and Education Industries

www.airsysnorthamerica.com

ABOUT US

AIRSYS Cooling Technologies Inc., is a global cooling solution provider with products and engineering services designed to provide a wide variety of solutions for schools, data centers, mobile shelters and outdoor telecom cabinets. Whether the products are used for sensible cooling telecommunication environments, or for human comfort, the AIRSYS team of highly trained technicians can assist their client's through every step of the deployment process from design through maintenance.

25th ANNIVERSARY

AIRSYS has reached an exciting milestone in 2020 with the company's 25th anniversary as an award-winning supplier of the world's most energy efficient cooling solutions.



RESEARCH AND DEVELOPMENT

As a global manufacturer of high-performance air-conditioning equipment, AIRSYS is committed to providing highly reliable and energy efficient cooling solutions for critical environments. At AIRSYS we are focused on progressive technologies for the HVAC industry. Through our large research and development division, we proudly develop new equipment that utilizes inverter driven technologies, coupled with precise controls to maximize the designed load calculations for a given space.

MANUFACTURING FACILITY

Located in the manufacturing belt of the Carolinas in Spartanburg County, AIRSYS operates out of a 60,000 square foot manufacturing facility and corporate headquarters. Our teams of highly trained technical, sales and field services staff are veteran HVAC industry insiders who all work together to provide 24/7 customer assistance for their clients.

GLOBAL FOOTPRINT

AIRSYS Group has multiple branches in 7 countries around the world. The two manufacturing centers are located in China and the United States. We have served more than 45 countries around the world.



APAC

China
Korea
India
Singapore
Malaysia
Philippines
Indonesia
Australia
Pakistan
Bangladesh
Kazakhstan
Nepal
Oman
Cambodia

Europe

UK
Germany
Italy
Spain
Romania
Serbia
France
Poland
Turkey
Russia

LATAM

Brazil
Argentina
Peru
Ecuador
Colombia

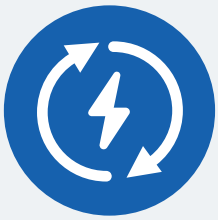
Africa

South
Africa
Kenya
Nigeria

NORAM

USA
Canada

CORE COMPETITIVENESS



Energy efficiency, Intelligent Control, High Reliability.



Best value in Capital Expenditures (CAPEX) and lowest in Operational Expenditures (OPEX)



Responsiveness



Strong R&D capability



Global Footprint providing turn-key service



Leading Edge Technologies



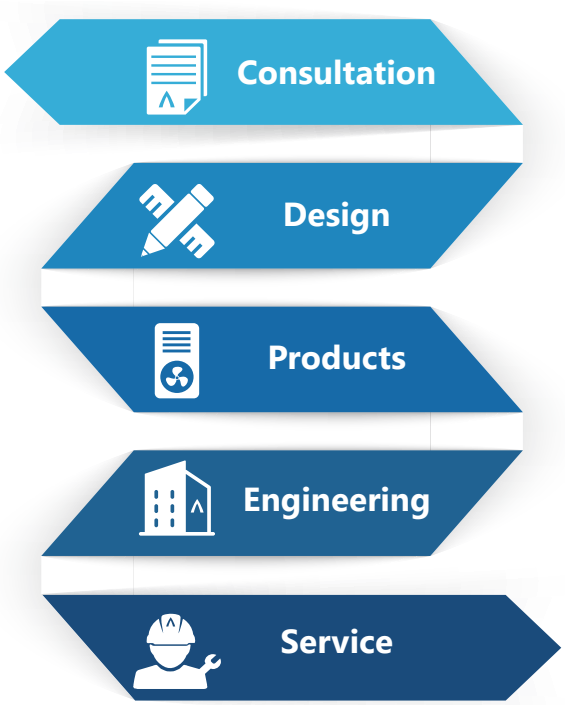
Lowest Total Cost of Ownership (TCO)



Best in class manufacturing facility

SERVICE


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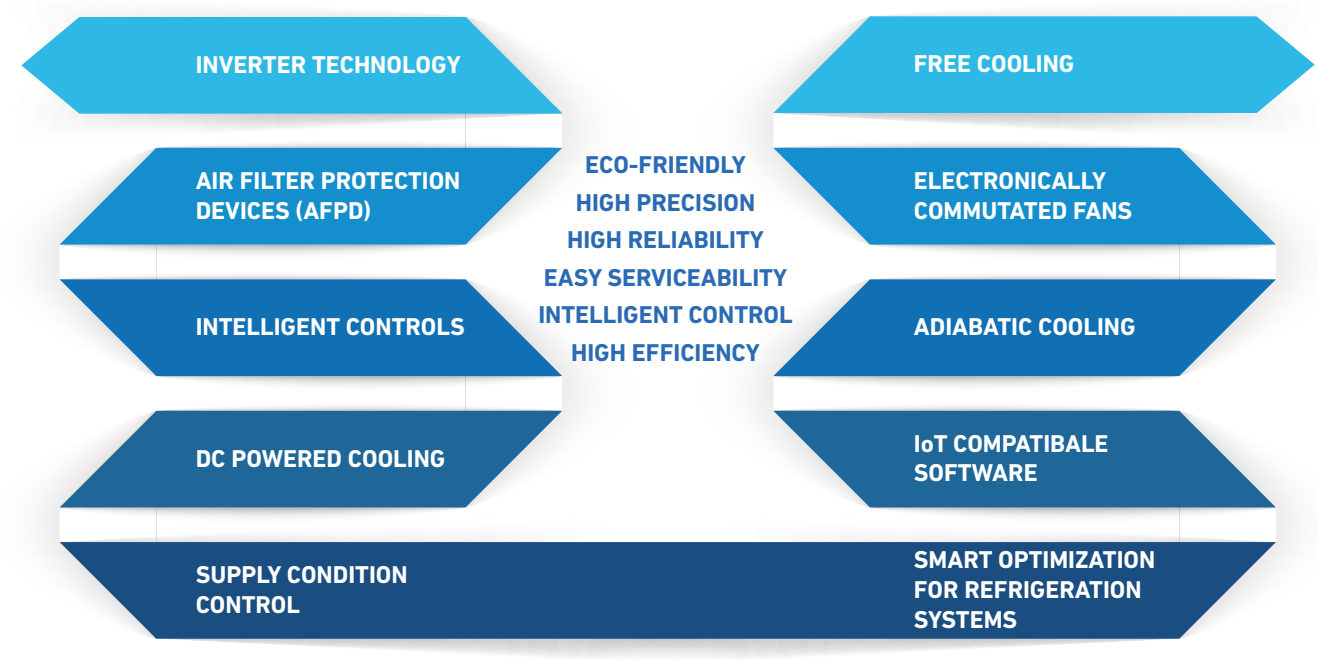

Consultation
Design
Products
Engineering
Service

TECHNOLOGIES

At AIRSYS we believe in the quality of the product throughout it's entire life cycle, including research and design, pilot testing, manufacturing, sales, and service. Therefore, we feel it is necessary to ensure quality control at all points throughout the product's life cycle. We oversee the whole process and have full participation in total quality management, so that quality standards continue to be met (or exceeded) and that customer satisfaction with our product is always ensured.

We proudly engineer the following ten technologies into each of our products. To Balance the Enviornment and forge ahead as a leading manufacturer of high performance HVAC products, these ten technologies are necessary to give our clients the highest quality products that reduce overall energy consumption, and provide high reliability for years to come.

10 CUTTING EDGE TECHNOLOGIES USED IN AIRSYS PRODUCTS



PRODUCT OVERVIEW

The heat pump system used in our COM4T units is designed with advanced inverter driven technology to provide variable speed capacity. Our COM4T units lead the industry in quiet operation, energy efficiency, reliability and comfort control.

Our COM4T heat pumps are wall mounted packaged units, that are available in a complete line of models for indoor and outdoor applications. We also offer electrical options for both single and three phase. The refrigerant piping and internal wiring are factory assembled and thoroughly tested. All components are readily accessible for easy service and maintenance.

FEATURES

- Indoor and Outdoor Wall-Mounted Packaged Units
- Designed for Human Comfort
- Inverter Driven Technology
- Variable Capacity
- Heat Pump



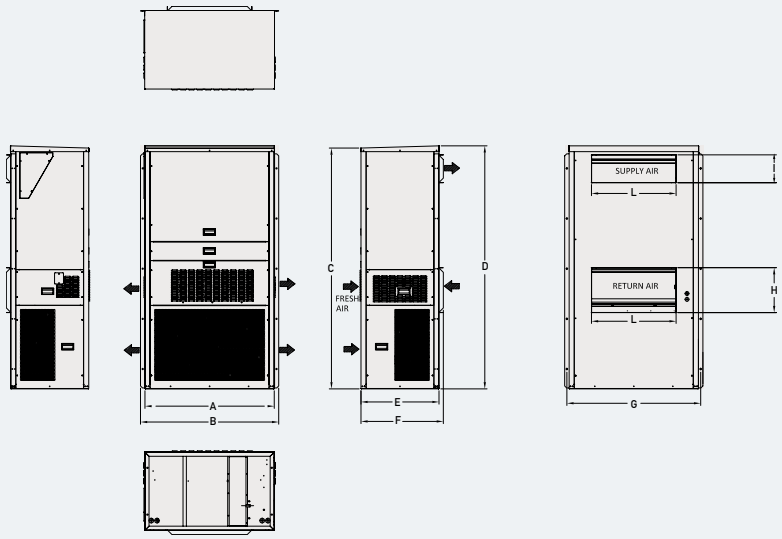
TECHNICAL PARAMETER

Series	Model	Cooling Capacity*	Heating Capacity*	Fresh Air Volume	PTC Heater	ERV	CRV	Econo-mizer
Heat Pump Outdoor	CV36H2A	17,600~42,200Btu/h	17,100~41,000Btu/h	~450CFM	0~10kW	√	√	√
	CV60H3A	28,300~67,800Btu/h	28,000~67,200Btu/h	~550CFM	0~10kW	√	√	√
Heat Pump Indoor	CV36N3A	17,600~42,200Btu/h	17,100~41,000Btu/h	~450CFM	0~10kW	√	√	√
	CV60N3A	28,300~67,800Btu/h	28,000~67,200Btu/h	~550CFM	0~10kW	√	√	√

cooling capacity @ 80 °F/95 °F; heating capacity @ 70°F/47 °F.

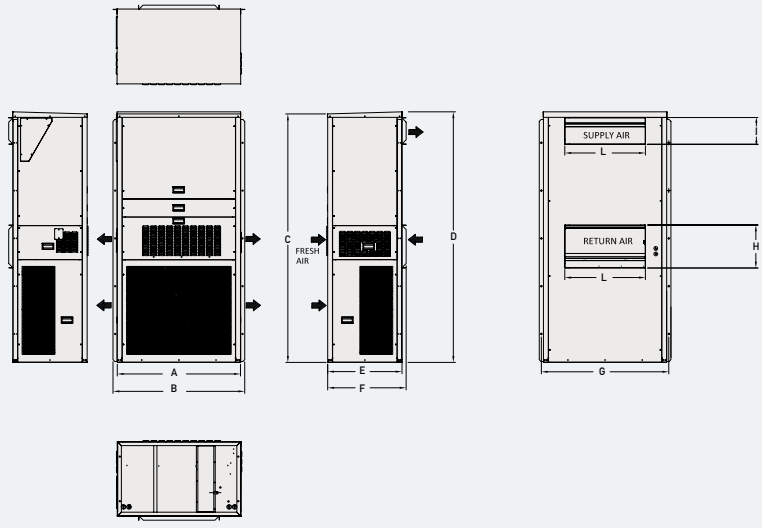
UNIT DIMENSIONAL DRAWINGS

CV36H2A



Model	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	L (in)
CV36H2A	45 11/16	48 13/16	85 1/16	85 13/16	27 9/16	29 1/16	47 1/4	15 7/8	9 13/16	29 7/8

CV60H3A



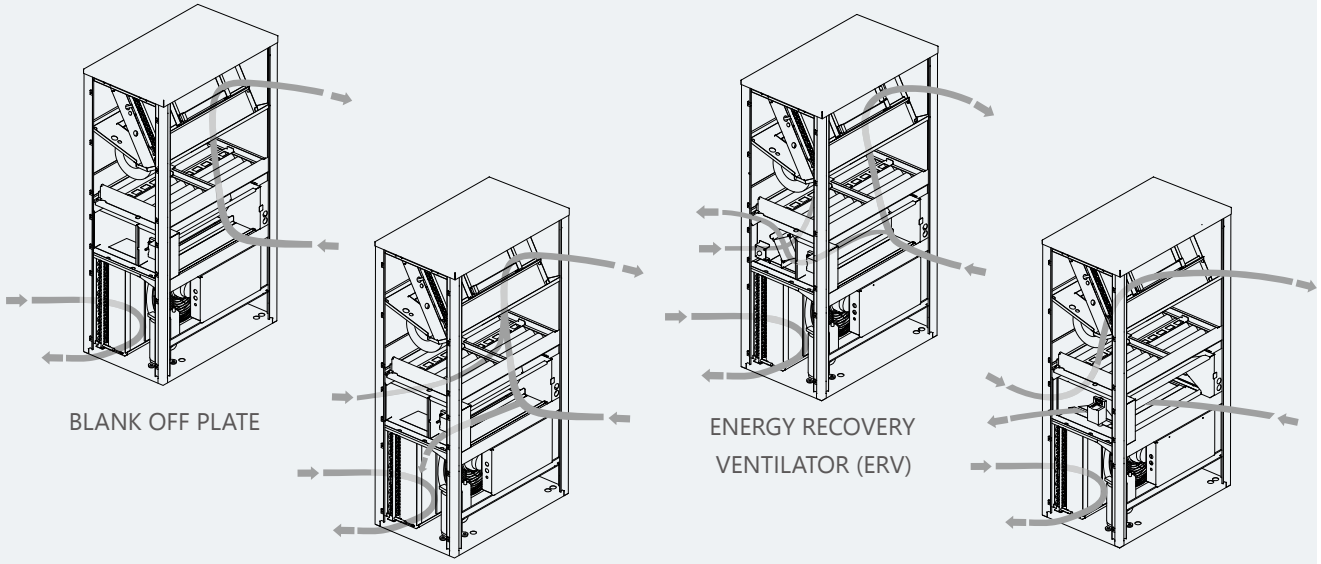
Model	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	L (in)
CV60H3A	45 11/16	48 13/16	92 1/8	92 15/16	27 9/16	29 1/16	47 1/4	15 15/16	9 15/16	29 7/8



Model	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)
CV36N3A	94 1/2	76 3/4	17 11/16	48 1/16	27 1/2	48 1/16	33 1/16	42 1/2

AIR FLOW SCHEMATIC DIAGRAMS

OUTDOOR Model



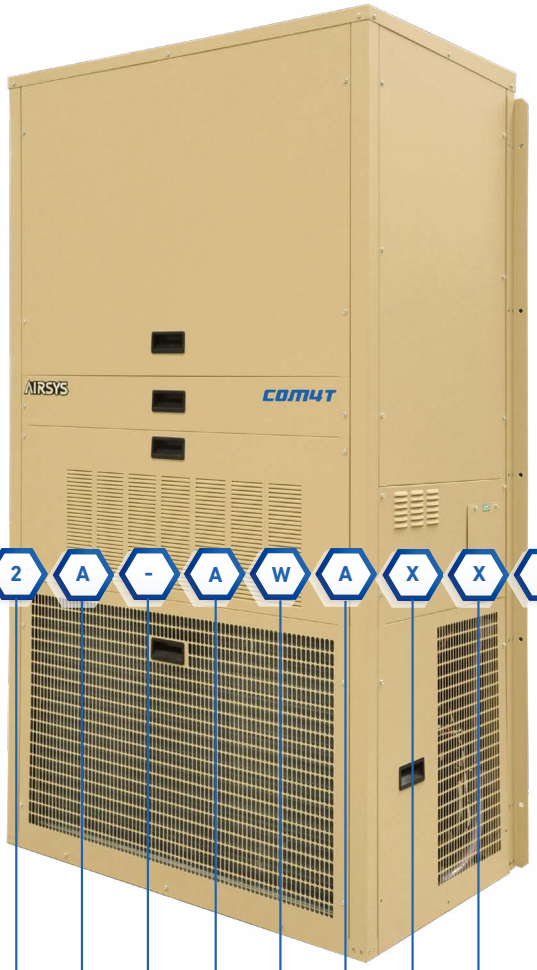
BLANK OFF PLATE

COMMERCIAL ROOM VENTILATOR (CRV)

ENERGY RECOVERY VENTILATOR (ERV)

ECONOMIZER

MODEL NUMBER NOMENCLATURE



C V 36 H 2 A - A W A X X - X 2 X X

Model Series
C: COM4T

Unit Type
V: Variable Capacity Inverter Compressor EC Supply Fan EC Condenser Fan

Capacity
36: 2 - 4 Ton
60: 3 - 6 Ton

Cabinet Type
H: Outdoor Cabinet
N: Indoor Cabinet

Cabinet Size

Revisions

Specialty Product

Power Source
A: 208/230V 1PH 60Hz
B: 208/230V 3PH 60Hz
C: 460V 3PH 60Hz

Control Modules
W: Wire Control

Refrigerant
A: R410A

Custom Options
X: Standard

Filter Options
X: 2" Standard MERV-8/G4 Throwaway
1: 4" Standard MERV-8/G4 Throwaway
2: 2" Standard MERV-10/F5 Washable
3: 4" MERV-13/F7 Throwaway (CA Min.)
4: 4" MERV 10/F5 Washable

Heater Options
0: No Heater
2: 4KW
3: 6KWr
4: 8KW
5: 10KW

Ventilation Options
X: CRV Motorized Fresh Air Damper
B: Blank-Off Plate
R: ERV Energy Recovery Ventilator
E: Economizer

Optional Product

Color Options
X: Tan
G: Gray
B: Black
Z: Bronze
W: White

Coil Options
X: Standard
C: Standard + Coastal Protection Coated Coils, Stainless Steel Fastener
E: Option C + Stainless Steel Body

For Example:
Model **C V 3 6 H 2 A - A W A X X - X 2 X X** stands for a COM4T Unit Model Series **(C)** with Variable Capacity Inverter Compressor, EC Supply Fan, EC Condenser Fan **(V)**, 2 - 4 Ton Outdoor Cabinet **(H)**, 208/230V 1PH 60Hz power **(A)**, Wire control **(W)**, R410A refrigerant **(A)**, Standard Coil **(X)**, Tan Color Option **(X)**, CRV Motorized Fresh Air Damper **(X)**, 4KW Heater **(2)**, 2" Standard MERV-10/F5 Washable **(2)**.
Note: *If multiple units are ordered, one Multi-unit control box is required.

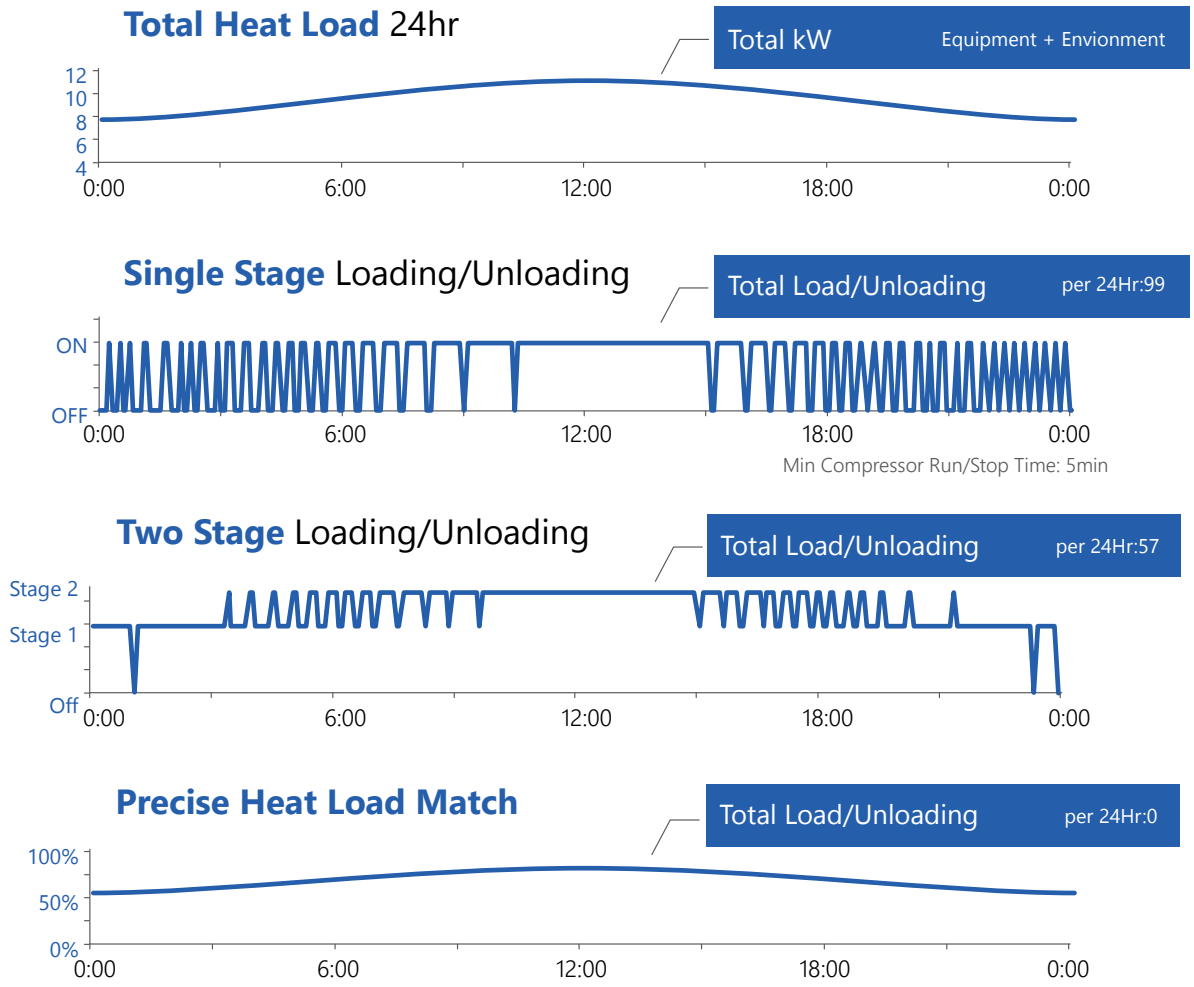
ENGINEERED FEATURES

VARIABLE CAPACITY COMPRESSOR

Precise Heat Load Match

Loading and unloading between stages of cooling introduces most of the mechanical stress on a compressor. The turn on of a fixed compressor wears down contactors and the resulting inrush current wears down other electronics. Even for properly sized units and properly set minimum compressor run/stop timer, the loading and unloading can reach one hundred times a day which would be > 30,000+ times per year.

Our UNICOOL units precisely match the heat load at all times through variable capacity compressor technology, which minimizes sudden loading and unloading of the compressor, vastly extending the life and reliability of the entire cooling system.



ENGINEERED FEATURES

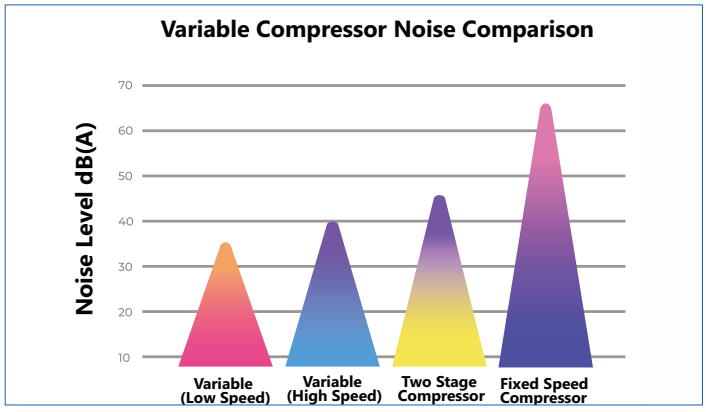
Quiet Operation

A better understanding of how critical sound impacts children's habits in the classroom has led us to pay maximum attention on minimizing noise levels.

Determined by the certified noise testing party DL Acoustics Research & Consulting, AIRSYS COM4T units only generate 36.7dBAs at low speeds and only 39.3dBAs at high speeds. At high speeds, the COM4T unit is > 70% quieter than the noise level required by the most stringent code in the country at 45dBAs. The COM4T unit delivers quiet comfort allowing our children more enhanced concentration in the learning environment.

Quiet Mode

Quiet mode further reduces noise by 5-7 dBA by limiting the maximum frequency the compressor may run at. Maximum cooling capacity will be reduced by 15% and Turbo Boost will be disabled when quiet mode is enabled.









Soft Start

Instead of sudden and numerous starts and stops, the variable compressor will ramp up capacity at startup and continuously modulate capacity to match the load of the shelter. This means generators no longer need to be sized to Locked Rotor Amps and a smaller generator and transfer switch system can be used. Soft start has the following advantages:

- Minimizes mechanical stress during the start up of the compressor
- Eliminate spike voltage on start up
- Reduced noise from sudden compressor loading

ENGINEERED FEATURES

1 Fresh Air Intake Options

Commercial Room Ventilator (CRV), energy recovery ventilator (ERV), and blank-off plate offer different fresh air intake options to meet indoor air quality requirement as established by ANSI/ASHRAE Standard 62.1.

2 Variable Speed EC Fans

Quiet and efficient variable speed supply and condenser fans provide a highly favorable energy efficiency curve when compared to conventional fans.

3 Indoor and Outdoor Configurations

Versatile installation configurations available for both outdoor wall mount and indoor floor mount models.

4 Dual Layer Exterior Protection

Galvanized steel exterior coated with an additional layer of thermoset polymer provides two layers of protection against corrosion.

5 Serviceability

The COM4T wall package unit design utilizes the same hole pattern as most modern day Single Packaged Vertical Units (SPVU), thereby saving money on installation. Curb options offer adaptability for different applications.

Front serviceability and snap in/snap out components make maintenance and repair a breeze. The COM4T unit system is designed for quick serviceability that enables local facility engineers to work on them with ease saving thousands of dollars in repairs by not having to hire costly HVAC technicians.at a time and up to 16 with an extension module. All parameters are available remotely through IP/SMNP for monitoring and setpoints and other critical control parameters can be changed remotely.

6 Quality Components

Our research and development team at AIRSYS spared no expense in making sure the top components in the industry went into the design of the COM4T unit. We designed for long term reliability with best in class components to minimize maintenance and repair costs throughout the product's operational life.

7 Electronic Expansion Valve (EEV)

The EEV allows the compressor to always run at the optimal condition, thus delivering superior energy consumption in a wide range of environmental conditions.

8 Low/High Pressure Protection

High and low pressure sensing protects the compressor and refrigeration circuit against loss of refrigerant charge, dirty filter, restricted outdoor coil, and low air flow. When repeatedly engaged, the HVAC automatically locks out mechanical cooling for 12 hours or until power is reset.



9 Turbo Boost Mode

In some situations, such as extreme high outdoor temperature, or increased equipment load, the heat load of the building may exceed the nominal cooling capacity of the HVAC system. When this happens, Turbo Boost Mode can be engaged automatically to deliver up to 125% of the nominal cooling capacity at the expense of slightly lower efficiency.

10 Speed Modulation

Our COM4T Unit features speed modulation based on real-time environment demand for cooling and heating, the variable speed system continuously adjusts to small temperature fluctuations offering excellent temperature stability.

11 Infinite Step Variable Capacity Cooling and Heating

ariable Frequency Drive (VFD) technology offers up to 17.8 IPLV, the highest efficiency rating on the market for any single packaged vertical systems.

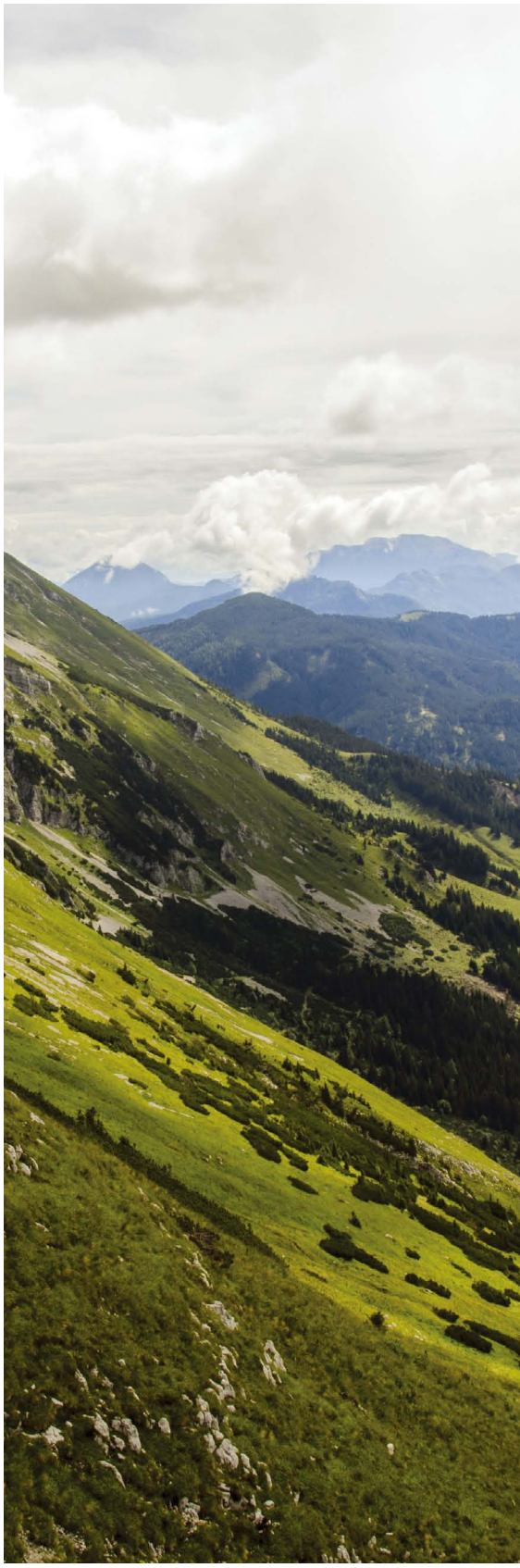
12 Comfort Control

The AIRSYS COM4T units deliver real-time demand cooling and heating capacity according to the needs of the environment. The variable capacity system continuously adjusts with small temperature fluctuations increasing the accuracy of temperature control for more advanced human comfort.

In the event of a sudden dramatic change in the environmental load, our COM4T units can initiate overspeed operation to rapidly cool down or heat up a room. COM4T units detect the temperature changes in the room and react by adjusting motor capacity intelligently and smoothly to provide the optimal environment for human comfort.

13 Auto Defrost

Frost can build up on the outdoor coil when the heat pump is operating in low temperatures. This can adversely affect the rate of heat transfer. If conditions are met, automatic defrost will be engaged to prevent frost buildup.





AIRSYS (NORTH AMERICA) SALES AND SERVICE CONTACT:

Sales Contact:

Email: ASNsales@air-sys.us
Company Main: + 1 (855) 874-5380

Service Contact:

Email: ASNsales@air-sys.us
Company Main: + 1 (855) 874-5380

AIRSYS GLOBAL SUBSIDIARIES CONTACT:

AIRSYS Refrigeration Engineering Technology (Beijing) Co., Ltd.
Add: 10th floor, Hongkun Shengtong building, 19, Ping Guo Yuan Xi Xiao Jie, Shijingshan, Beijing, China 100043
Tel: +86(0)10 68656161

Gu'an Airsys Environment Technology Company Ltd.
Add: 25, Dongfang Street, Gu'an Industry Park, Langfang City, Hebei Province, China
Tel: +86(0)10 68656161

Shanghai Airserve HVAC System Service Co., Ltd.
Add: #7-2, No.658, Daduhe Rd., Putuo District, Shanghai, China, 200333
Tel: +86(0)21 62452626 Fax: +86 (0)21 62459622

AIRSYS Australia Sales Office
Add: PO BOX 1088, Flagstaff Hill, SA, 5159, Australia
Tel: +61 479151080

AIRSYS BRASIL LTDA.
Add: Av. Moaci, 395 Conj 35/36 04083-000 – Planalto Paulista SAO PAULO – SP
Tel: +55 (11) 25976817 / +55 (11) 21585560

AIRSYS Deutschland GmbH
Add: Dahlweg 120, D-48153 Münster Germany
Tel: +49 (0) 1757535054 / 251-97307478

AIRSYS Turkey - Klima Sanayi ve Ticaret A.Ş.
Add: Barbaros Mahqq. Evren Cad. Erzurumlular Sk. No:23 Ataşehir / Istanbul Turkey
Tel: +90(216) 4706280 Fax: +90(216) 4706290

AIRSYS (North America), LLC
ICT and Human Comfort Cooling:
Add: 7820 Reidville Rd.
Greer, SC 29651 , USA
Tel: +1 (855) 874 5380
Web: https://airsysnorthamerica.com/

Medical Cooling:
Add: 3127 Independence Dr Livermore, CA 94551, USA
Tel: +1 800 7131543
Web: https://advancedcoolingtech.com/

AIRSYS Singapore Pte. Ltd
Add: 12 Lorong Bakar Batu #06-01 Singapore (348745)
Tel: +65 62787188 Fax: +65 68416301

AIRSYS (UK) Ltd.
Add: 245 Europa Boulevard, Warrington, UK. WA5 7TN
Tel: +44 (0) 1925 377 272 Call Centre: +44(0)8456099950

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Product design and specification subject to change without prior notice.

WWW.AIRSYSNORTHAMERICA.COM