ADDISON™



100% OUTSIDE AIR
AND
GEOTHERMAL APPLICATIONS

COOLING
HEATING
DEHUMIDIFICATION

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ADDISON™

SPECIALIZING IN 100% OUTSIDE AIR AND GEOTHERMAL APPLICATIONS

KNOWN FOR COMFORT AND RELIABILITY

Addison is a leading supplier of cooling, heating and dehumidification products for new and replacement commercial and industrial applications. Through the years, the company has maintained its leadership position by designing specialized products that provide increased indoor air quality, comfort and energy efficiency. Today, Addison has an extensive product offering that can meet a variety of design requirements and applications.

EXTENSIVE PRODUCT RANGE

Addison strives to produce products with an emphasis on energy efficiency, innovative design, reliability and ease of service. The company's products are designed to balance many important factors, including heating and cooling needs, energy efficiency, humidity control, as well as adherence to codes and standards.

In today's health-conscious environment, fresh air and proper ventilation are key factors helping to maintain overall building air quality. Addison specializes in 100% outside air units to help meet these needs. The company also specializes in ground source/geothermal applications.

Addison's diverse product range includes rooftop and indoor units, heat pumps and split systems; available in custom or packaged configurations. Also available are direct-fired and indirect-fired air handling units, indirect-fired air turnover units, unit heaters, duct furnaces and gas-fired, low-intensity infrared heaters.

Armed with a variety of products and years of expertise, Addison can provide custom solutions to meet numerous air management requirements.

AIR MANAGEMENT EXPERTISE

Addison has an experienced team of professionals and a modern manufacturing facility. With this combination of assets, the company can provide custom systems with a multitude of air management solutions built to unique specifications.

IDEAL FOR A VARIETY OF APPLICATIONS

Over the years, Addison has provided comfort and economy for a variety of markets such as schools, hotels, restaurants, office buildings, hospitals, health care facilities, warehouses, industrial buildings and more! The knowledge the company has gained from its years of experience and breadth of building types makes Addison well equipped to handle a variety of today's air management applications.

AIR MANAGEMENT SOLUTIONS

Addison provides an array of solutions that further enhance the high quality and reliability of the ADDISON™ brand. Several products within the line provide features and options to handle 100% outside air treatment, dehumidification, energy savings, filtration and harsh environment protection. In addition, Addison offers a variety of control options.

ADDISON™



A WIDE RANGE OF QUALITY PRODUCTS

100% OUTSIDE AIR

PACKAGED ROOFTOP UNITS

HEAT PUMPS

SPLIT SYSTEMS

GEOTHERMAL

PACKAGED ROOFTOP UNITS

HEAT PUMPS

ROOFTOP AIR HANDLING UNITS

CONTROLS

NEW AUTOMATED LOGIC CONTROLLER

AIR HANDLING UNITS

INDIRECT AND DIRECT-FIRED

AIR TURNOVER UNITS

INDIRECT-FIRED

GAS-FIRED EQUIPMENT

UNIT HEATERS

DUCT FURNACES

LOW-INTENSITY INFRARED HEATERS

APPROVALS

ADDISON™ products have met the stringent requirements and received approval from the following certifying agencies (US and Canada):

APPROVAL	MODEL
INTERTEK ETL C US LISTED	DC/DW-Series TRS-Series VWY/VGY-Series WW-Series RC-Series VC/HC-Series RAH-Series AIDF-Series AAT-Series
INTERTEK ETL C US LISTED CANADA: 100% OUTSIDE AIR ONLY	ADF-Series
CSA CERTIFIED	UHA-Series UHD-Series BH-Series CGTH-Series CTHN-Series
CSA DESIGN CERTIFIED	
C UL US LISTED	ALC-Control

Packaged Rooftop Units

with 100% Outside Air Option

DC/DW-Series – 3 to 35 Tons

Semi-Custom Heating, Cooling and/or Dehumidification Systems



The DC/DW-Series is available in air source heat pump (DC) or water source heat pump (DW) for cooling tower/boiler and geothermal applications, as well as 100% outdoor air handling unit configurations. These packaged systems are designed to accept a variety of factory-installed options for heating, humidification, dehumidification, ventilation, corrosion protection, electrical and refrigeration control.

The modular cabinet design provides space for specialty filtration, humidifiers, air blenders, return fans and heating options. These units can be roof-mounted on a factory supplied roof curb or platform-mounted. DC/DW-Series units are for commercial, institutional and industrial applications ranging from office buildings to medical facilities to manufacturing facilities.

TRS-Series – 3 to 35 Tons

Heating, Cooling and/or Dehumidification Systems



Available in air-cooled and water-cooled models, the TRS-Series is a rooftop heating and air conditioning system configurable to a variety of HVAC needs. The air–cooled models include an air conditioning unit (TRSA) and a heat pump unit (TRSH). Water-cooled models include a water source heat pump (TRSW) and a geothermal water/ground source heat pump (TRSG).

Utilizing R410A refrigerant, the TRS-Series is available in a 100% outside air version. With easy access to supply blower/motor assemblies, condenser coils and fan, the TRS-Series is easy to maintain. These units also offer a host of configurable options for heating, cooling and dehumidification.

Typical applications for the TRS-Series include institutional, industrial and commercial such as restaurants, shopping malls, schools and manufacturing areas,- just to name a few.

Geothermal Water Source Heat Pumps

VWY/VGY-Series – 8 to 30 Tons

High Efficiency, Water-to-Air Indoor Heat Pumps

Available with a closed loop system utilizing a cooling tower and a boiler, the VWY-Series operate with entering water temperature between 55° F (13° C) and 95° F (35° C). Available for ground or geothermal loop heat exchanger applications, the VGY-Series are rated with entering fluid temperature between 30° F (-1° C) and 100° F (38° C).



Each packaged unit contains a compressor, reversing valve, metering device and water to refrigerant heat exchanger. Safety controls include overload protection for motors, high and low refrigerant pressure switches and a lockout control circuit.

These vertical units are ideal for a wide range of building applications such as offices, schools, health care facilities, retirement homes, hotels, motels, multi-family housing, as well as manufacturing facitilies.

Water Heating Units

WW-Series - 3 to 35 Tons

High Efficiency, Water-to-Water Indoor Heat Pumps

With R410A refrigerant, the WW-Series is available in heating only (WWH model line), cooling only (WWC model line) or both (WWR model lines). The WW-Series units provide warm or cool water. The load side can be composed of fan coil units, radiant coils, baseboard radiation or process application. The source side can be composed of a cooling tower, geothermal loop, well, lake, etc.



The WW-Series is well suited for commercial and industrial process cooling and/or heating applications. Chiller applications include: commercial air conditioning, spot cooling, computer room cooling, industrial process cooling or injection molding cooling. Heating applications include hydronic, snow and ice melting, swimming pool heating and domestic water heating.

Split Systems

with 100% Outside Air and Recirculating Options

RC-Series – 3 ½ to 40 Tons

High Efficiency, Outdoor Condensing Units



The RC-Series, featuring R410A refrigerant, is a collection of split system model lines: the RCC air cooled condensing unit with recirculation, the RCA air cooled 100% outside air model and the RCH heat pump.

Available in both single and multiple circuit configurations, the RCC model line offers high efficiency and component flexibility, which allows for a wide range of capacities and options. The RCA models are designed to cool and dehumidify 100% outside air for applications requiring makeup-air cooling. These units can be installed on a slab or on post and rails. The RCH model helps provide year-round heating and cooling. Outdoor air is drawn in through the sides of the unit and discharged out the top to help ensure quiet and efficient performance.

RC-Series units are typically installed in commercial and industrial applications such as hotels, sports arenas, office buildings, as well as manufacturing facilities.

VC/HC-Series – 4 to 35 Tons

High Efficiency, Air Handling Units



Featuring R410A refrigerant, the VC/HC-Series, split system air handler is a matching model line to the RC-Series condensing unit. The VC/HC-Series consists of the VCC/HCC air cooled air handler, VCH/HCH heat pump model line and the VCA/HCA 100% outside air handler model line.

Designed to operate with the RCC/RCH models, the VCC/HCC models help provide high energy efficiency ratios and a wide range of airflows. Flexible horizontal or vertical configurations are available with either single circuited evaporator coils for single compressor unit or dual circuited face split evaporator coils for dual compressor units.

The VCA/HCA air handlers help provide high latent capacities necessary for today's indoor air quality standards. Built to operate with the RCA-Series, these flexible units are field ducted to circulate 100% outside air. VC/HC-Series units are ideal for a variety of commercial, institutional and industrial applications.

Split System Air Handler

RAH-Series – 500 to 14,000 CFM

Multi-Function Rooftop Air Handling Units

Available in R410A refrigerant, the RAH-Series is a semi-custom, modular rooftop air handler. The modular cabinet design provides space for specialty filtration, humidifiers, air blenders, return fans and heating options.

Roof-mounted on a factory supplied roof curb or platform-mounted, these units can be used in a wide range of commercial, institutional and industrial applications from office buildings to hospitals to shopping centers.



Controls

ADDISON™ ALC Controls

Automated Logic Controls

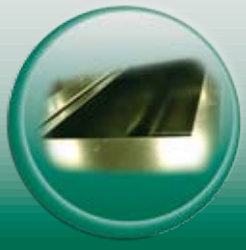
The ALC Automated Logic Controller consists of a stand alone controller, handheld keypad/display panel and room sensor. The controller can be easily customized to meet various sequence of operation needs and can connect to the four leading protocols.

The handheld keypad/display panel allows local access to the controllers and their operational properties, as well as management of a small facility. The sensor provides precision measurement and communication capabilities in an attractive, low profile enclosure.



ADDISON™ STANDARD FEATURES

	DC/DW-SERIES	TRS-SERIES	VWY/VGY-SERIES	WW-SERIES	RC-SERIES	VC/HC-SERIES	RAH-SERIES
Heavy-gauge, galvanized steel cabinet and formed channel galvanized steel base rails	X	X	X	X	X	X	X
High-efficiency open-drip proof (ODP) blower motors	X	X	X			X	X
Double wall cabinet construction with internal galvanized steel liners and closed cell foam insulation		X				X	
Seamless copper refrigeration tubing in condenser and evaporator coils	X	X	X		X	X	X
Two-coat, primer-paint finish on both interior and exterior of cabinet panels.	X	X	X	X	X	X	X
Stainless steel or coated exterior fasteners	X	X			X		X
Insulated stainless steel drain pans	X	X	X			X	X
High efficiency scroll compressors	X	X	X	X	X		X
Insulated G-90 galvanized steel base pan	X	X					X







ADDISON™ SPECIALTY OPTIONS

100% Outside Air Treatment

- Fresh air adds to a comfortable indoor environment by improving indoor air quality and ventilation. Several ADDISON™ products offer 100% outside air capability.

Dehumidification

- 6 row DX evaporator coils for increased cooling and dehumidification capability.
- Hot gas reheat (staged or modulating), located downstream of the evaporator, for precise supply air dry bulb temperature.
- Head pressure control system with a variable speed motor-driven fan is controlled from refrigerant pressure rather than ambient temperature to reflect the operating conditions in the unit.
- Liquid sub-cooling for increased capacity/ efficiency and lower dew point.
- Addison has a specialized combination of hot gas reheat and liquid subcooling. This option helps increase equipment capacity, while helping to reduce electrical usage, which can result in significant savings and increased efficiency. A one-row subcooling coil may be factory-installed; adding up to 35° F (1.7° C) of subcooling. Compressor capacity increases approximately 1% for every 2° F (-17° C) of subcooling.

Digital Scroll Compressor

- The digital scroll compressor will help to greatly improve unit performance at part load conditions, thus allowing the unit to match the required load. Additionally, by reducing the on and off cycling of the compressor, it will help to greatly reduce the wear and tear and increase the compressor life.

Energy Savings

- Packaged units have high efficiency scroll compressors, job specific fan sizing and large surface heat transfer components to help maximize energy efficiencies.
- Energy recovery wheels are also available to transfer heat and moisture between the incoming fresh air and the outgoing exhaust air, thereby using less energy to provide more optimal temperature and humidity levels.

Controls

- Automated Logic Controls (ALC)
- Remote bulb entering and leaving air thermostats and pressure switches.
- Wall thermostat control.
- Addison will also mount and wire controls supplied by others.

Filtration

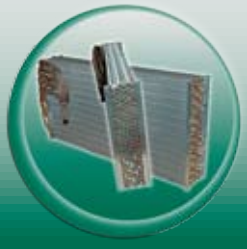
- A multitude of filtration options are also available.

Coil Coatings for Harsh Environment Protection

- Corrosion-resistance and microbial coating is approved up to 10,000 hours salt spray test (per ASTM B117 97). To help facilitate an even coverage on coils, they are coated prior to assembly, providing a high level of protection.
- Cabinet and components' coatings for harsh environment protection
- Interior and exterior of the cabinet are coated to protect units when exposed to moderate to aggressive corrosive atmospheres. Coating may also be applied to tubing, compressors, blowers and other internal components for up to 10,000 hours salt spray test protection.

Copper Fins

- Evaporators and air-cooled condensers can be furnished with copper fins.




Air Handling Units

ADF-Series – 110,000 to 6,480,000 Btu/h

Direct-Fired Air Handling Units



Available in horizontal or upright configurations for indoor or outdoor applications, ADF-Series help improve indoor air quality and provide comfort. These units can be designed to help efficiently establish and maintain a slightly pressurized condition in facilities by tempering outdoor air and, as required, mixing it with existing indoor air.

The ADF-Series is available in 100% outdoor air, fixed outdoor air/ return air and variable outdoor air/return air arrangements. The ADF-Series heating systems deliver 100% of the heat generated into the building, resulting in energy savings. In addition, the heating systems require little to no ductwork.

Ideal applications for ADF-Series units include providing make-up air in commercial kitchens, as well as pressurization in manufacturing settings.

AIDF-Series – 240,000 to 4,500,000 Btu/h

Indirect-Fired Air Handling Units



Available in horizontal or upright configurations, for indoor or outdoor applications, AIDF-Series offer flexibility with three fuel options, nine discharge choices and a variety of accessories. The modular design of these units, combined with its heavy-duty construction, provides customization and durability.

The AIDF-Series utilize a three or four pass heat exchanger, resulting in high efficiency. In addition, the units provide discharge air that is free of combustion by-products. The AIDF-Series is available in 100% outdoor air, fixed return air/outdoor air and variable return air/outdoor air arrangements.

Enclosed public spaces with occupants, such as schools, gymnasiums and libraries, as well as manufacturing spaces are typical installations.

AAT-Series – 240,000 to 4,500,000 Btu/h

Indirect-Fired Air Turnover Units



Available in an upright configuration for indoor applications only, AAT-Series help minimize heat stratification problems by drawing in cooler air from the floor, warming it and re-circulating it throughout the area. Utilizing heavy-duty, belt driven propeller blade fans, these units help move vast quantities of air quietly and efficiently. As a result, AAT-Series help produce a more comfortable, evenly heated space.

The AAT-Series' systems offer flexibility with three fuel options, two control options and a variety of accessories. These units can achieve temperature differences as low as 3° F - 5° F (16.11° C - 15° C) throughout the space. Optional features include the ability to ventilate, cool and provide make-up air.

Industrial applications such as warehouses and distribution centers are typical installations.

STANDARD FEATURES

		ADF-SERIES	AIDF-SERIES	AAT-SERIES
Fan Type	Centrifugal Fan	X	X	
	Propeller Fan(s)			X
Inlet Air	100% Outside Air	X	X	
	100% Return Air		X	X
	Return Air/Outdoor Air Mix	X	X	
Heating Type	Direct-Fired Line Burner		X	X
	Indirect-Fired Burner with Drum and Tube Heat Exchanger		X	X
Fuel Type	Natural Gas/LPG	X	X	X
	Oil		X	X

UPGRADES AND ACCESSORIES

(ADF-Series and AIDF-Series Only)

Discharge Heads

- Discharge heads can be attached to the discharge opening of horizontal air handlers, upright air handlers, the wall or the end of ductwork to control the direction of discharge air. A variety of different discharge head configurations are available, including one-way, three-way or four-way heads.

Inlet Hoods

- Used to minimize water entrainment on horizontal units, an inlet hood may be attached to the inlet end of an outdoor horizontal air handler or the wall penetration for an indoor horizontal air handler. The inlet hood is available with several different inlet opening options, including aluminum mesh filters, bird screen or moisture limiter media.

Filter Sections (ADF-Series, AIDF-Series and AAT-Series)

- In order to filter the outside air entering an air handler, a filter section can be used. V-bank style filter sections are used on the ADF-Series and AIDF-Series, while flat-panel style filter sections are used on the AAT-Series. Filter sections include 30% polyester, 30% pleated or aluminum mesh filters.

Legs/Stands

- Addison offers legs and/or stands to assist in the installation of indoor or outdoor air handlers to a concrete pad. Depending on the model, legs and/or stands are available in a number of different heights.

Motorized Dampers

- In order to prevent the exfiltration of warm or contaminated room air through the air handler cabinet when not running, Addison offers motorized, two-position dampers for both the inlet and discharge penetrations of an air handler.

Roof Curbs

- Roof curbs can be used to simplify roof mounting of horizontal outdoor units. Field-assembled, roof curbs are available in several different heights.

Air Handling Unit Controls

ADF-Series

Controls for Direct -Fired Air Handling Units



Basic Remote

Remote includes blower on/off switch and operation light, burner on/off switch and operation light and a discharge temperature selector. When in the heating mode, the air handler is discharging air into the space at the temperature set on the discharge temperature selector.

Standard Discharge Control Remote (SDC)

Remote includes blower on/off/auto switch and operation light, burner summer/winter switch and operation light, clogged filter light, burner lock-out light, discharge temperature selector and room thermostat. When in the heating mode, the air handler cycles on and off to meet the temperature set on the room thermostat. When on, the air handler is discharging air into the space at the temperature set on the discharge temperature selector.

Deluxe Temperature Control Remote (DTC)

Remote includes blower on/off/auto switch and operation light, burner summer/winter switch and operation light, clogged filter light, burner lock-out light, space temperature selector and digital thermostat. When in the heating mode, the air handler is discharging air into the space at a modulating discharge temperature to meet the space temperature set on the space temperature selector. Digital thermostat provides additional night setback capabilities.

AIDF-Series and AAT-Series

Controls for Indirect-Fired Air Handling and Air Turnover Units



8.1 Discharge Temperature Control

Remote includes summer/off/winter switch, blower operation light, burner operation light and burner lockout light. A discharge temperature selector/sensor is also shipped loose for field installation. When in the heating mode, the air handler is discharging air into the space at the temperature set on the discharge temperature selector/sensor.

8.5 Room Temperature Control

Remote includes summer/off/winter switch, blower operation light, burner operation light, burner lockout light and room thermostat. When in the heating mode, the air handler is discharging air into the space at a modulating discharge temperature to meet the space temperature set on the room thermostat.

Gas-Fired, Tubular Unit Heaters and Duct Furnaces

UHA-Series – 30,000 to 385,000 Btu/h

Axial Fan Tubular Unit Heaters

With a minimum of 82% thermal efficiency, UHA-Series is a gas-fired, power-vented unit heater with tubular heat exchanger. UHA-Series units are available in non-separated or separated combustion chamber models, as well as with aluminized or stainless steel heat exchangers.

For indoor installation only, UHA-Series units may be shelf mounted or suspended from above. These units are often installed in entryways or often used for summer air circulation.



UHD-Series – 75,000 to 385,000 Btu/h

Tubular Duct Furnaces

UHD-Series is a gas-fired, power-vented duct furnace with a tubular heat exchanger. With the use of the tubular heat exchanger and inshot burners, UHD-Series units achieve a minimum of 82% thermal efficiency. UHD-Series units are available in non-separated or separated combustion models, as well as with aluminized or stainless steel heat exchangers.

For indoor installation only, UHD-Series units may be shelf mounted or suspended from above. Some UHD-Series heaters may also be installed downstream of a refrigeration system with optional stainless steel heat exchanger and drain pan.

These units can be beneficial for both new and retrofit applications. They are also installed in existing duct work for additional heat in cold areas of factories, warehouses, vestibules and workshops.



Gas-Fired, Low-Intensity Infrared Heaters

BH-Series – 40,000 to 200,000 Btu/h

Economical Low-Intensity, Unitary Infrared Heaters



With a broad range of burner sizes and tube lengths, the BH-Series provides clean, quiet draft-free comfort. Models are available in straight, U-tube or L configurations for design flexibility. Competitively priced for the budget-conscious consumer, BH-Series are also easy to operate and maintain.

Ideal applications for these heaters include assembly areas, vestibules, vehicle service facilities, loading docks, etc.

CTHN-Series – 40,000 to 200,000 Btu/h

Negative Pressure, Low-Intensity, Unitary Heater and Multiburner Infrared Heating Systems



With a broad range of burner sizes and tube lengths, the CTHN-Series can fit a variety of building sizes and floor plans. The heater's vacuum design helps provide uniform tube temperature for even heat distribution. As a result, CTHN-Series heats effectively at high mounting heights and in high heat loss environments.

Unitary models are available in straight, U-tube or L configurations and can be connected together to form a multiburner system of up to 1.6 million Btu/h. Custom-engineered with a variety of zoning options, multiburner systems reduce building penetrations and installation cost as a result of multiple burner per pump.

Ideal applications for these heaters include: airplane hangars, warehouses, distribution centers, manufacturing facilities – just to name a few.

CGTH-Series – 30,000 to 50,000 Btu/h

Compact, Low-Intensity, Infrared Heaters for Light Commercial Applications



Factory-assembled for easy installation, the CGTH-Series have a compact, U-tube design for maximum inputs at minimum lengths. The heater's balanced flue for both exhaust and combustion air results in only one building penetration.

CGTH-Series are ideal in areas with limited space such as lobbies, workshops, entrance ways – just to name a few.

STANDARD FEATURES

	BH-SERIES	CTHN-SERIES	CGTH-SERIES
Durable components	X	X	X
Detailed Installation, Operation and Service Manuals	X	X	X
Burner box design with protective enclosure for controls	X	X	X
Deep-dish, parabolically-designed, highly efficient reflectors	X	X	X
Positive pressure blower control	X		X
Negative pressure blower control		X	

SPECIALTY OPTIONS

Reflectors

- Low-intensity, infrared heaters include standard reflectors and tube and reflector hangers. The tube and reflector hangers have a 90° (straight) and 45° (tilted) hanging option, designed for controlling the heat pattern. For additional control over the reflectors and heat pattern, side reflectors can be added.

U or L Configurations

- The standard configuration of the BH-Series and CTHN-Series are straight tube heaters. A U-tube package or an elbow can be purchased to form a U or L configuration with the heater. The CGTH-Series heater is only available as a U-tube unit.

Controls/Thermostats

- The BH-Series and CTHN-Series heaters can be used with a low voltage (24 V) thermostat or a line voltage thermostat. Thermostats must be purchased separately. The CGTH-Series heater includes a low voltage (24 V) thermostat.

Decorative and Protective Grilles

- For low ceiling height installation, decorative grilles can be purchased for safety. On select models of the CGTH-Series, protective grilles are standard.



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Installation Code and Quarterly Inspections: All installation and service of ADDISON™ equipment must be performed by a contractor qualified in the installation and service of equipment sold and supplied by Addison and conform to all requirements set forth in the ADDISON™ manuals and all applicable governmental authorities pertaining to the installation, service and operation of the equipment. To help facilitate optimum performance and safety, Addison recommends that a qualified contractor conduct quarterly inspections of your ADDISON™ equipment and perform service where necessary, using only replacement parts sold and supplied by Addison.

Further Information: Applications, engineering and detailed guidance on systems design, installation and equipment performance is available through ADDISON™ representatives. Please contact us for any further information you may require, including the Installation, Operation and Service Manual.

These products (with the exception of the CGTH and UHA[X][S] 30 - 75) are not for residential use.

This document is intended to assist licensed professionals in the exercise of their professional judgment.

Specifications are subject to change without notice.

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