

ADDISON®

CUSTOM PACKAGED COOLING SYSTEMS DC/DW-SERIES

- Design flexibility- Modular cabinets allows the incorporation of a wide range of standard and custom features.
- Maintain specific temperature and humidity levels- Utilize optional hot gas refrigerant reheat to help effectively de-humidify and re-warm outside air to neutral conditions.
- Meet energy efficiency requirements- Use of optional energy conversion wheel can help provide "free" pre-conditioning to supply air.
- Satisfy both warm-weather and cold-weather applications- Optional gas, electric and hydronic supplemental heating can help maintain setpoints in winter conditions.



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DC: RATED IN ACCORDANCE TO ANSI/AHRI STANDARDS 210/240-2008 OR 340/360-2007.
DW: RATED IN ACCORDANCE TO ISO STANDARD 13256-1:1998.

CUSTOM PACKAGED COOLING SYSTEMS

ADDISON® custom packaged cooling systems are outdoor systems typically installed in new or retrofit commercial applications.

FEATURES OF DC/DW-SERIES

Long-Lasting Construction Provided by:

- Heavy-duty cabinet constructed of galvanized steel panels, 1" (25.4 mm) closed cell foam insulation to help improve unit's efficiency and metal liner.
- Two-coat, primer-paint finish on both interior and exterior of cabinet panels that meets the 1,000 Hour Salt Spray Test as described in ASTM B117, "Standard Practice for Operating Salt Spray (Fog) Apparatus".
- Stainless steel and/or MAGNI 555®-coated hardware to help prevent fastener corrosion.
- Sloped, stainless steel drain pan equipped with drain fittings positioned on the exterior of the cabinet to help facilitate removal of condensate.
- Vinyl-coated condenser fan guards to help ensure long-term durability.
- Evaporator and condenser coils composed of aluminum fins and mechanically-expanded, seamless copper refrigeration tubing to help ensure long-term efficient heat transfer from tube to fin.
- Fully-insulated coaxial coils to help minimize condensation build-up.
- Optional harsh environment protection coating on coils and cabinet that exceeds the 10,000 Hour Salt Spray Test as described in ASTM B117, "Standard Practice for Operating Salt Spray (Fog) Apparatus".

Ease of Maintenance Provided by:

- Direct-drive condenser fans with permanently-lubricated or sealed ball bearings that require little maintenance and no oiling.
- Liquid, suction and discharge line service ports that provide hose connections when charging refrigerant into system.
- Suction line accumulators that help eliminate return of liquid refrigerant back to compressor.
- Optional 115V GFCI electric receptacle to provide easy-access power to service technician at unit.

Reliable, Efficient System Operation Provided by:

- High-efficiency scroll compressors with crankcase heaters to help prevent refrigerant migration.
- Supply and condenser fans that are both statically and dynamically balanced in order to provide smooth performance.
- High efficiency, ODP or TEFC supply fan motors to meet EISA2007 (Energy Independence and Security Act) requirements.
- Head pressure control to help ensure proper unit operation at low ambient temperatures.
- Assembly, testing and installation preparation by factory staff, including charging of compressors with oil and charging of circuits.
- Phase/voltage monitor to help detect abnormalities in electric supply.
- Optional digital scroll compressor assembly that provides continuous capacity modulation for part load conditions.

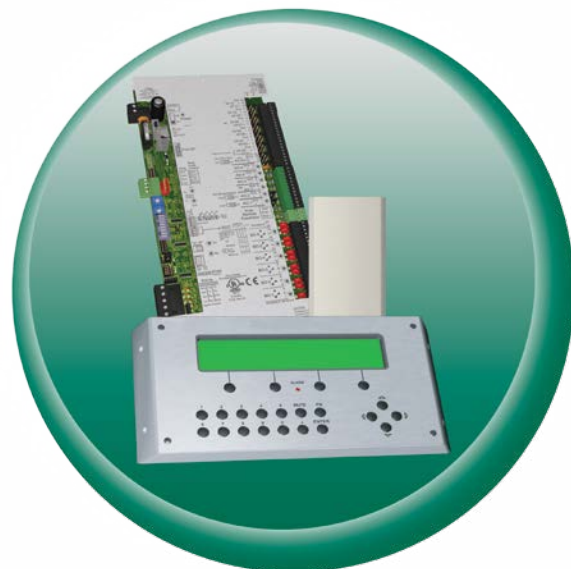
Suit Most Applications with Availability of:

- Optional standard or modulating hot gas reheat to re-warm dehumidified air to a neutral discharge temperature.
- Optional energy conservation wheel with or without bypass to help provide "free" pre-conditioning of supply air.
- Optional gas, electric or hydronic supplemental heating to help meet temperature setpoints during cold weather conditions.
- Optional switchable sub-cooling to help increase compressor full-load capacity with no increase in compressor power consumption.
- Optional direct digital or electromechanical controls to meet a wide range of operational needs.

DIRECT DIGITAL CONTROLLER

The ADDISON® ALC Control is a direct digital controller that can efficiently monitor and control ADDISON® equipment. Features and benefits of the ALC Control include:

- Greater control of equipment with ability to monitor and change room temperature and humidity, outside air temperature and humidity and leaving air temperature setpoints (as applicable depending on equipment type and application).
- Detect problems earlier with ability to monitor status of compressor(s), supply fan and exhaust fan (as applicable depending on equipment type and application).
- Design flexibility as the controller can operate in a stand-alone capacity or in conjunction with a Building Management System (BMS) via the BACnet®, Modbus, LonWorks® and N2 protocols.
- Simple field set-up without the need for additional downloads or technical assistance as the protocol point mapping is pre-set in the factory.
- Customizable with six digital outputs, six analog outputs and twelve universal inputs. Customized programming to meet a specific application's sequence of operation is also available.



CONFIGURATIONS & CAPACITIES

DC Unit (Air-Cooled for Cooling Applications)

Design: Heat is transferred from load-side supply air to source-side ambient air via refrigerant.

Function: Provides cooled air to the conditioned space.

Application: Ideal for applications requiring 100% outside air or recirculated air that is cooled.

DC MODEL	AIRFLOW		COOLING CAPACITY		EER
	CFM	m ³ /h	Btu/h	kW	
036	1,200	2,038	34,600	10.1	13.1
048	1,600	2,718	49,200	14.4	13.9
060	2,000	3,398	67,400	19.8	13.2
072	2,400	4,077	84,100	24.6	11.9
096	3,200	5,436	101,700	29.8	11.5
120	4,000	6,796	142,400	41.7	11.9
150	5,000	8,495	171,900	50.4	11.5
180	6,000	10,194	191,500	56.1	10.9
240	8,000	13,592	287,200	84.2	11.7
300	10,000	16,990	318,600	93.4	11.2
360	12,000	20,388	350,000	102.6	10.7
420	14,000	23,786	428,000	125.4	11.6

DW Unit (Water-Source Heat Pump for Heating/Cooling Applications)

Design: Depending on the operation, heat is transferred from load-side supply air to source-side water or from source-side water to load-side supply air via refrigerant.

Function: Provides cooled or heated air (depending on operation) to the conditioned space.

Application: Ideal for applications requiring year-round heating and cooling.

WATER LOOP APPLICATIONS	DW MODEL	AIRFLOW		WATER FLOW		COOLING CAPACITY		EER	HEATING CAPACITY		COP
		CFM	m ³ /h	GPM	L/s	Btu/h	kW		Btu/h	kW	
036	1,200	2,039	9.0	0.57	36,200	10.6	13.9	42,900	12.6	4.8	
048	1,600	2,718	12.0	0.76	51,200	15.0	14.3	58,500	17.1	5.2	
060	2,000	3,398	15.0	0.95	62,900	18.4	14.8	69,700	20.4	5.2	
072	2,400	4,078	18.0	1.14	79,900	23.4	13.5	92,700	27.2	4.7	
096	3,200	5,437	24.0	1.51	101,400	29.7	14.2	116,500	34.1	5.1	
120	4,000	6,796	30.0	1.89	137,100	40.2	13.7	158,800	46.5	4.7	
150	5,000	8,495	38.0	2.40	168,000	49.2	13.5	196,500	57.6	4.8	
180	6,000	10,194	45.0	2.84	194,900	57.1	13.6	228,700	67.0	4.8	
240	8,000	13,592	58.0	3.66	280,600	82.2	13.9	306,400	89.8	4.7	
300	10,000	16,990	75.0	4.73	312,900	91.7	13.1	348,100	102.0	4.7	
360	12,000	20,388	90.0	5.68	358,300	105.0	13.3	419,000	122.8	4.7	
420	14,000	23,786	105.0	6.62	428,000	125.4	13.2	521,100	152.7	4.8	

GROUND LOOP APPLICATIONS	DW MODEL	AIRFLOW		WATER FLOW		COOLING CAPACITY		EER	HEATING CAPACITY		COP
		CFM	m ³ /h	GPM	L/s	Btu/h	kW		Btu/h	kW	
036	1,200	2,039	9.0	0.57	41,000	12.0	20.5	34,800	10.2	4.2	
048	1,600	2,718	12.0	0.76	58,500	17.1	21.6	47,400	13.9	4.5	
060	2,000	3,398	15.0	0.95	71,900	21.1	22.0	56,500	16.6	4.5	
072	2,400	4,078	18.0	1.14	90,500	26.5	19.9	77,800	22.8	4.2	
096	3,200	5,437	24.0	1.51	115,500	33.8	21.3	94,500	27.7	4.4	
120	4,000	6,796	30.0	1.89	155,200	45.5	19.1	129,900	38.1	4.0	
150	5,000	8,495	38.0	2.40	190,200	55.7	19.0	156,500	45.9	4.1	
180	6,000	10,194	45.0	2.84	219,500	64.3	18.9	189,300	55.5	4.3	
240	8,000	13,592	58.0	3.66	317,200	93.0	19.2	249,200	73.0	4.1	
300	10,000	16,990	75.0	4.73	235,800	69.1	18.6	282,700	82.9	4.2	
360	12,000	20,388	90.0	5.68	406,600	119.2	18.6	342,000	100.2	4.2	
420	14,000	23,786	105.0	6.62	485,000	142.1	18.4	417,200	122.3	4.1	

GEOTHERMAL APPLICATIONS	DW MODEL	AIRFLOW		WATER FLOW		COOLING CAPACITY		EER	HEATING CAPACITY		COP
		CFM	m ³ /h	GPM	L/s	Btu/h	kW		Btu/h	kW	
036	1,200	2,039	9.0	0.57	37,800	11.1	15.8	28,100	8.2	3.5	
048	1,600	2,718	12.0	0.76	53,500	15.7	16.3	38,000	11.1	3.7	
060	2,000	3,398	15.0	0.95	65,900	19.3	16.9	45,100	13.2	3.7	
072	2,400	4,078	18.0	1.14	83,400	24.4	15.4	61,100	17.9	3.5	
096	3,200	5,437	24.0	1.51	106,100	31.1	16.2	75,700	22.2	3.6	
120	4,000	6,796	30.0	1.89	143,300	42.0	15.4	104,500	30.6	3.4	
150	5,000	8,495	38.0	2.40	175,500	51.4	15.2	124,800	36.6	3.6	
180	6,000	10,194	45.0	2.84	203,200	59.6	15.2	153,000	44.8	3.7	
240	8,000	13,592	58.0	3.66	292,800	85.8	15.6	197,200	57.8	3.5	
300	10,000	16,990	75.0	4.73	327,700	96.0	14.8	230,100	67.4	3.6	
360	12,000	20,388	90.0	5.68	374,500	109.8	15.0	274,900	80.6	3.5	
420	14,000	23,786	105.0	6.62	446,964	131.0	14.7	336,500	98.6	3.5	

- Notes:
1. EER= Energy Efficiency Ratio (SEER=Seasonal Energy Efficiency Ratio for units with cooling capacity below 65,000 Btu/h); COP=Coefficient of Performance.
 2. DC cooling performance is based on 80.0°F (26.7°C) DB / 67.0°F (19.4°C) WB entering air temperature and 95.0°F (35.0°C) DB / 75.0°F (23.9°C) WB ambient temperature.
 3. DW cooling performance (both variations) is based on 80.6°F (26.7°C) DB / 66.2°F (19.0°C) WB entering air temperature. Water loop application performance is based on 86.0°F (30.0°C) entering water temperature. Ground loop application performance is based on 59.0°F (15.0°C) entering water temperature. Geothermal application performance is based on 77.0°F (25.0°C) entering water temperature. DW heating performance (both variations) is based on 68.0°F (20.0°C) DB / 59.0°F (15.0°C) WB entering air temperature. Water loop application performance is based 68.0°F (20.0°C) entering water temperature. Ground loop application performance is based on 50.0°F (10.0°C) entering water temperature. Geothermal application performance is based on 32.0°F (0.0°C) entering water temperature.



THANK YOU FOR YOUR BUSINESS

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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, operation and labeling of the equipment. To help facilitate optimum performance and safety, Addison recommends that a qualified contractor conduct, at a minimum, 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.

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