

ADDISON

PACKAGED UNITS

DC SERIES

3-30 TONS



Application

Each basic Model DC Series unit is a packaged DX cooling system designed to accept a variety of factory installed options for dehumidification, ventilation, corrosion control, electrical control, and refrigeration control. During the heating mode, supply air may be heated and the temperature maintained by operating factory installed indirect gas fired, electric, steam or hot water heat as needed. Humidity control is accomplished with optional factory installed hot gas reheat, hot gas Reheat Plus^{PAT}, or a total energy wheel.

The DC units may be roof mounted on a factory supplied roof curb. DC units may be slab mounted on a special return air curb, or installed on post and rails.

Every unit is charged with refrigerant R22 and run tested in both cooling and heating modes before shipment.

All units are certified by ETL, under ANSI/UL 1995. The furnace designs are certified by American Gas Association (A.G.A.), under ANSI 283 and the Canadian Gas Association (C.G.A.) under CAN/CGA-2.8.

Standard Sizes

Model Sizes	Nominal CFM	Nominal Cooling (Btuh)	EER*
Single Compressor Models			
036	1,200	39,600	10.9
048	1,600	48,500	9.8
060	2,000	60,900	9.7
Dual Compressor Models			
072	2,400	74,800	11.2
096	3,000	97,800	10.2
120	4,000	117,300	9.1
150	5,000	155,400	10.7
180	6,000	188,300	9.9
240	8,000	236,000	8.9
300	10,000	300,200	9.3
360	12,000	359,500	9.5

*SEER on units below 65,000 Btuh cooling.
Performance tested and rated in accordance with ARI Standard 210/240-94.

Standard Design Features

Heavy Duty Cabinet. All models are constructed of G-90 galvanized steel. Bases are minimum 16 gauge, corner posts minimum 18 gauge, access panels are minimum 20 gauge and top panels are 18-gauge minimum. The interior of the indoor airside is thermally insulated with 1" thick fiberglass with an R-value of 4.2. Insulation surface exposed to the air stream is finished with an acrylic coating that is resistant to air erosion and microbial growth. This coating combined with the dual density construction enhances the acoustical characteristic. The cabinet is mounted on corrosion protected steel rails to facilitate installation.

Paint Finish. Constructed of hot dipped galvanized G-90 steel that is chemically treated with zinc phosphate, coated with 0.2 to 0.3 MIL polyurethane primer then finished with .07 to .08 MIL polyester top coat, these attractive units are suitable for a variety of applications. Finish meets or exceeds 1,000 hour Salt Spray Test per ASTM B117 97.

Non-rust Sound Attenuating Base Pan. Unit base pans are fabricated from 16 gauge G-90 galvanized steel which is coated with a mastic compound to a uniform ¼" wet depth, air dried, that cures into a solid protective layer to eliminate corrosive oxidation.

Non-Corroding Hardware. Exterior nuts, bolts and washers are stainless steel. Exterior screws are either stainless steel or steel coated with Magniguard Silver 17, an epoxy finish containing aluminum flake pigment that meets or exceeds 10,000 hour Salt Spray Test per ASTM B117 97.

Compressor. High efficiency scroll compressors have been selected for their reliability and state of the art technology. Compressor mounting are as recommended by the compressor manufacturer to minimize vibration transmission to the unit structure and reduce piping stress.

Standard Design Features Cont.

Compressor Protection. All compressors are equipped with crankcase heat. The compressor motors are equipped with internal overheat-overload protection.

Evaporator Coil. The indoor air coil has sine wave shaped aluminum plate-finned formed on multiple rows of seamless copper tubing arranged in a staggered tube configuration. The tubes are mechanically expanded, firmly bonding the tube to the collar of each fin.

Evaporator Blower and Motor. A forward-curved, statically and dynamically balanced DWDI centrifugal blower(s) is used for the evaporator air. Blower wheels are fabricated of galvanized or galvalume steel. Blower housings are fabricated of galvanized or epoxy coated steel. The blower wheel(s) is mounted on a solid steel shaft supported by sealed ball bearings. The shaft is belt driven with adjustable drive sheaves connected to a 1725-RPM motor with sealed ball bearings. The sealed bearings on both the blower shaft and motor do not require lubrication. Standard motors up to 3 horsepower are internally protected (auto-reset) and motors 5 horsepower and larger and high efficiency motors are externally protected (manual reset).

Refrigerant Circuit. Included in each refrigerant circuit is a filter-drier, high pressure safety control (manual-reset), low pressure control/loss of charge protector (auto-reset), gauge connections for high and low pressure readings, sight glass-moisture indicator, and thermal-expansion valve. All compressors 7½ tons and larger are equipped with accumulators. The expansion valve has adjustable superheat and distributors to meter the refrigerant evenly to the evaporator refrigerant circuits. Low ambient operation to 60°F. is standard.

Electric Controls. Internally wired controls include the compressor anti-short cycle timer, airflow switch and the blower and compressor motor contactors or starters mounted in a sheet metal control panel. The 24-volt control circuit includes a transformer and low voltage terminal board for external thermostat control hookup.

Sloped Stainless Steel Condensate Drain Pan. The condensate drain pan is sloped to comply with ASHRAE Standard 62-1089R and fabricated from stainless steel. The bottom is then insulated with 1" fiberglass insulation. The drain pan is furnished with single or dual MPT drain fittings positioned at the exterior of the cabinet.

(See Specification sheets for quantity and size).

Condenser Fan Motor. Fan motors are fitted with permanently lubricated/sealed ball bearings protected with shaft mount rain shields. Propeller fans are constructed with steel spider and formed aluminum blades securely riveted together. Fans are statically and dynamically balanced to provide efficient operation.

Coated Condenser Fan Guards. Fan guards are vinyl coated for long life.

Filters. All models are supplied with standard 2" thick disposable glass fiber media filters mounted in factory installed filter racks.

Options

(Refer to Addison's Options & Accessories Book for detailed descriptions)

Coated Coils:

ADDICOAT 6000™.
Whitaker P/C100.
Baked phenolic.
Flexible dip and bake epoxy coating.

Coating Options:

Mill & Chemical Service.
Seacoast Construction.
Seacoast Plus.

Refrigerant Circuit Components & Controls:

Adjustable high and low pressure switches.
Hot gas reheat.
Reheat Plus™ patent No. 5,651,258.
Hot gas bypass.
Liquid sub-cooling coil.
Low ambient head pressure control to 35°F.
VARISPEED™ low ambient head pressure control to 0°F.
Condenser head pressure control to - 20°F.

Evaporator Motors:

High efficiency blower motor.
Totally enclosed blower motor.
Totally enclosed high efficiency blower motor.

Cabinet:

Vinyl coated wire coil guards.
Louvered hail guards.
Foil faced fiberglass insulation.
Closed cell foam insulation.
Closed cell polyolefin insulation.
Closed cell polyolefin insulation with aluminum inner walls.
Closed cell foam insulation with aluminum inner walls.
Steel pillow block blower bearings.
Plastic pillow block blower bearings with stainless steel insert and race.
Power through the curb.
Quick release handles.
Right supply air discharge (DC Model).
Left supply air discharge (DC Model).

Filters:

2 Inch aluminum metal media filters.
2 Inch extended surface pleated filters (30% efficient).
2 Inch frame with replaceable filter media.

Electrical Options Continued:

Clogged filter indicator.
115 volt GFCI convenience outlet with 15A circuit breaker.
115 volt GFCI convenience outlet with 15A fuses.
Differential air pressure switch (standard with gas heat).
Exhaust fan interlock relay (to start remote exhaust fan).
Filter differential gauge.

Options Continued

Firestat.

Non-fused disconnect NEMA3R enclosure.

Phase/voltage monitor.

Component control group - a solid state package that on a call for cooling, evaporator blower motor starts. After 1 second delay, condenser fan starts. After 2 second delay, compressor #1 starts. After another 3 second delay, compressor #2 starts.

2 row Copper tube, copper fin hot water coil.

4 row Copper tube, aluminum fin chilled water coil.

6 row Copper tube, aluminum fin chilled water coil.

4 row Copper tube, copper fin chilled water coil.

6 row Copper tube, copper fin chilled water coil.

Five minute anti-short cycle time delay is also included (delay begins upon opening of thermostat). Compressor operation is locked out upon opening of high-pressure cutout or low-pressure cutout (low-pressure cutout is bypassed for 90 seconds at start-up to avoid nuisance trips.) Reset remotely at thermostat or by cycling power to unit. Switched 24vac output for remote fault indicator.

Heat Options:

Electric Heat – Factory installed with single point power termination.

Gas Heat – Natural Gas or LP – 80% AFUE

Aluminized heat exchanger with aluminized burners and aluminized bottom pan.

409 stainless steel heat exchanger with 409 stainless steel burners and bottom pan.

321 stainless steel heat exchanger with 409 stainless steel burners and bottom pan.

Single stage gas valve.

Two stage gas valve.

Two-stage gas valve with unit mounted ductstat.

Two stage gas valve with electronic ductstat and 50° - 130° remote temperature selector.

Two stage gas valve with electronic ductstat and 50° - 130° remote temperature selector and display module.

Electronic burner modulation.

Electronic modulation (50%) with duct probe (55° - 90°).

Electronic modulation (50%) with duct probe and remote temperature selector (55° - 90°).

Electronic modulation with DDC control.

Room override thermostat.

Combination high / low-pressure switch.

High gas pressure safety switch.

Low gas pressure safety switch.

Specialty Coils:

Copper tube, copper fin DX evaporator coil.

Copper tube, copper fin condenser coils.

1 row Copper tube, aluminum fin steam coil.

2 row Copper tube, aluminum fin steam coil.

1 row Copper tube, copper fin steam coil.

2 row Copper tube, copper fin steam coil.

1 row Copper tube, aluminum fin hot water coil.

2 row Copper tube, aluminum fin hot water coil.

1 row Copper tube, copper fin hot water coil.

Controls:

O. No ventilation, with termination for 24v control circuit.

A. Manual 20% out door air damper, with termination for 24v-control circuit.

B. Motorized proportional outside air damper, with termination for 24v-control circuit.

C. ASHRAE cycle I economizer, with termination for 24v control circuit.

D. ASHRAE cycle II economizer, with termination for 24v control circuit.

E. ASHRAE cycle III economizer, with termination for 24v control circuit.

F. No ventilation, with microprocessor control.

G. ASHRAE cycle I economizer, with microprocessor control.

H. ASHRAE cycle II control, with microprocessor control.

J. ASHRAE cycle III economizer, with microprocessor control.

Exhaust:

Relief damper.

Centrifugal blower power exhaust.

Return air blower.

Energy Conservation:

Applied energy conservation wheel.

Waste heat recovery desuperheater.

Accessories

Mounting Curbs and Supports:

Full perimeter curb.

Burglar bars.

Insulated curb.

Sloped roof kit.

Support frame.

Hold down kit.

Horizontal return air curb.

Gas Furnace:

High Altitude Kit

Vertical Vent Kit

Thermostats:

Electromechanical

Electronic

Electronic programmable

Model Code Construction

Models are selected by model number code from the tables on the following pages. After determining the capacity, blower motor horsepower, and electrical characteristics required for the application, select the unit type and size, evaporator motor horsepower and type, and power supply. These four codes describe the basic standard unit.

Next in the model number is the series designation. From time to time, the factory will change the series as major design improvements are introduced.

Next, select the codes for any optional features. **If no options are desired, insert "0" in each option code field.**

Model Designation Chart

0	1	2	3	4	5	6	7	8	9	10	11	12a	12b	12c	12d	12e	12f	13	14
Type (DC/EC)	Unit size	Evap. Hoeseepow	Evap. Motor Type	Power Supply	Series	Evaporator Coil	Coating	Condenser Coil	Coating	Cabinet	Insulation	Configuration						Heat Option	Coating
					A														

Unit Size		Nom. Tons	Blower HP	
1	036	3	2	C ½
	048	4		E ¾
	060	5		F 1
	072	6½		G 1½
	096	8		H 2
	120	10		J 3
	150	12		K 5
	180	15		L 7½
	240	20		M 10
	300	25		N 15
360	30	X		

Evap. Motor	
0	Standard nominal efficiency ODP motor
1	Totally enclosed motor
2	High efficiency motor
3	Totally enclosed high efficiency motor
4	reserved
5	reserved
6	reserved
X	Applied special

Power Supply	
3	208/230-3-60
4	460-3-60
6	380/415-3-50
X	Applied Special

Evaporator Coil		
6	A	Standard – Copper Tube Aluminum Fin
	B	Copper Tube/Copper Fin Coil
	E	4 row Copper tube, aluminum fin chilled water coil
	F	6 row Copper tube, aluminum fin chilled water coil
	G	4 row Copper tube, copper fin chilled water coil
	H	6 row Copper tube, copper fin chilled water coil
	X	Applied Special
7	0	Coil not coated
	1	Coated with ADDICOAT 6000
	2	Coated with Whitaker P/C 100
	3	Coated with flexible dip and baked epoxy
	4	Baked Phenolic coating
	X	Applied Special

Condenser Coil		
8	0	Standard – Copper tube aluminum fin
	A	Copper tube/copper fin coil
	X	Applied Special
9	0	Coil not coated
	1	Coated with ADDICOAT 6000
	2	Coated with Whitaker P/C 100
	3	Coated with flexible dip and baked epoxy
	4	Baked Phenolic coating
	X	Applied Special

Cabinet			
10	0	Paint on G90 with SS bolts & washers, magnigard screws	
	3	Mill & Chemical Service	
	4	Seacoast Construction	
	5	Seacoast Plus	
	X	Applied special	
11	0	Fiberglass R4.2 insulation	
	A	Foil faced fiberglass R4.2 insulation	
	B	Closed cell foam insulation	
	C	Closed cell polyolefin insulation	
	D	Closed cell foam insulation with aluminum inner walls	
	E	Closed cell polyolefin insulation with aluminum inner walls	
	X	Applied special	
	Yes	No	Cabinet options
12a	1	0	Power thru curb
12b	1	0	Reserved
12c	1	0	Quick release handles on service panels
12d	1	0	Vinyl coated wire coil guard
12e	1	0	Louvered hail guards.
12f	X	0	Applied special

Heat Options		
13	0	No Heat
	A	Electric Heat
	B	1 row hot water coil, copper tube, aluminum fin
	C	1 row hot water coil, copper tube, copper fin
	D	2 row hot water coil, copper tube, aluminum fin
	E	2 row hot water coil, copper tube, copper fin
	K	1 row steam coil, copper tube, aluminum fin
	L	1 row steam coil, copper tube, copper fin
	M	2 row steam coil, copper tube, aluminum fin
	N	2 row steam coil, copper tube, copper fin
	P	Aluminized heat exchanger, Natural Gas Furnace
	Q	Aluminized heat exchanger, LP Gas Furnace
	R	409 Stainless Steel Natural Gas Furnace
	S	321 Stainless Steel Natural Gas Furnace
	T	409 Stainless Steel LP Gas Furnace
U	321 Stainless Steel LP Gas Furnace	
X	Applied Special	

Heating coil coating		
14	0	Coil not coated or Not Applicable
	1	Coated with ADDICOAT 6000
	2	Coated with Whitaker P/C 100
	3	Coated with flexible dip and baked epoxy
	4	Baked Phenolic coating
	X	Applied Special

Model Designation Chart Continued

15	16	17	18a	18b	18c	18d	18e	18f	18g	18h	18j	18k	18m	18n	18p	18q	18r	18s	19	20a	20b	20c	20d	20e	20f	
Elec. Heat	Heater Voltage	Gas Input	Furnace Options																	Stages	Electric Options					

15	Electric Heat	
	kW	Description
	00	NA
	A0	5
	B0	10
	C0	15
	D0	20
	E0	25
	F0	30
	G0	35
	H0	40
	J0	45
	K0	50
	L0	55
	M0	60
	N0	65
	P0	70
	Q0	75
	R0	80
	S0	85
	T0	90
	U0	95
	V0	100
	W0	105
	Y0	110
	Z0	115
	AA	120
	AB	130
	AC	135
	AD	140
AE	145	
AF	150	
AG	155	
AH	160	
AJ	170	
AK	180	
AL	185	
AM	190	
AN	200	
AP	205	
AQ	210	
AR	215	
AS	220	
AT	225	
AU	230	
AV	235	
AW	240	
X0	Applied special	

16	Electric Heat Voltage	
	Code	Description
	0	NA
	2	208-1-60
	3	240-1-60
	5	208-3-60
	6	240-3-60
7	480-3-60	
X	Applied special	

19	Stages	
	Code	Description
	0	None
	1	1 Stage
	2	2 Stages
	3	3 Stages
	4	4 Stages
5	Burner modulation	
X	Applied special	

17	Gas Furnace Input	
	Code	Description
	0	NA
	A	100,000
	B	125,000
	C	150,000
	D	175,000
	E	200,000
	F	225,000
	G	250,000
	H	300,000
J	350,000	
K	400,000	
X	Applied Special	

Electrical Options			
Code	Yes	No	Description
20a	1	0	Standard controls or Not Applicable
20b	1	0	Stagger-start delay
20c	1	0	Clogged filter indicator
20d	1	0	115V GFCI with 15A BREAKER convenience outlet
20e	1	0	115V GFCI with 15A FUSES convenience outlet
20f	1	0	Differential air pressure switch
20g	1	0	Exhaust fan interlock relay
20h	1	0	Filter differential gauge
20j	1	0	Firestat
20k	1	0	Energy management relay
20m	1	0	NEMA 3R non-fused disconnect
20n	1	0	Phase/voltage monitor
20p	1	0	Component control group
20q	X	0	Applied special

Gas Furnace Options			
Code	Yes	No	Description
18a	1	0	Single stage gas valve
18b	1	0	Two stage gas valve
18c	1	0	Electronic burner modulation
18d	1	0	High gas pressure safety switch
18e	1	0	Low gas pressure safety switch
18f	1	0	Two stage gas valve with unit mounted ductstat
18g	1	0	Two stage gas valve with electronic duct stat and 50° - 130° remote temperature selector
18h	1	0	Two stage gas valve with electronic duct stat and 50° - 130° remote temperature selector and display module
18j	1	0	Electronic modulation (50%) with duct probe (55°F - 90°F)
18k	1	0	Electronic modulation (50%) with duct probe and remote temperature selector (55°F - 90°F)
18m	1	0	Electronic modulation with DDC control
18n	1	0	Room override thermostat
18p	1	0	Combination High / Low pressure switch
18q	1	0	Reserved
18r	1	0	Reserved
18s	X	0	Applied special

Model Designation Chart Continued

20g	20h	20j	20k	20m	20n	20p	20q	21	22	23	24	25	26a	26b	26c	26d	26e	26f	26g	26h	26j	26k	27	28	29	30
Electrical Options Continued								Blower Options	Filters	Vent. & Control	Reheat	Coating	Refrigeration Options										ECW	EX. Blower H.P.	Ex. Motor Tupe	Exhaust

Evaporator Blower Options					Refrigeration Options	
			Yes	No		
21	0	Standard evaporator blower bearings				
	1	Steel Pillow block evaporator blower bearings	26a	1 0	No refrigeration options	
	2	Plastic Pillow block evaporator blower bearings	26b	1 0	Hot gas bypass (Single compressor units or lead only on dual compressor units),	
	X	Applied Special				
Filters			26c	1 0	Cylinder unloading (semi-hermetic compressor),	
22	0	2" disposable glass fiber media filters	26d	1 0	First stage waste heat recovery water heater (Desuperheater)	
	3	2" aluminum metal media filters	26e	1 0	VARISPEED variable speed condenser fan motor and head pressure control , to 0°F,	
	5	2" extended surface pleated filters				
	7	2" Metal frame with replacement media	26f	1 0	Low ambient head pressure control (fan cycling) to 35°F	
	4	Reserved	26g	1 0	Condenser head pressure control to -20°F	
	5	Reserved	26h	1 0	Adjustable high & low pressure switches	
	6	Reserved	26j	0 0	Reserved	
	7	Reserved	26k	X 0	Applied special	
	X	Applied Special				

Ventilation & Controls	
0	Standard controls
A	No ventilation, with microprocessor control
B	No ventilation, terminated for 24V control circuit
C	Manual 20% O/A damper, terminated for 24V control circuit
D	Motorized proportional O/A damper terminated for 24V control circuit
E	ASHRAE cycle I economizer terminated for 24V control circuit
F	ASHRAE cycle II economizer terminated for 24V control circuit
G	ASHRAE cycle III economizer terminated for 24V control circuit
H	ASHRAE cycle I economizer with microprocessor control
J	ASHRAE cycle II economizer with microprocessor control
K	ASHRAE cycle III economizer with microprocessor control
X	Applied Special

ECW	
0	No ECW
A	ECW # 224
B	ECW # 324
C	ECW # 364
D	ECW # 424
E	ECW # 484
F	ECW # 544
G	ECW # 604
H	ECW # 664
J	ECW # 726
K	ECW # 786
X	Applied special

Exhaust Blower HP	
C	½
E	¾
F	1
G	1½
H	2
J	3
K	5
L	7½
M	10
N	15
X	

Reheat	
0	No Reheat Options
A	1st stage hot gas reheat with copper tube aluminum fin coil
B	1st and 2nd stage hot gas reheat with copper tube aluminum fin coil
C	1st stage hot gas reheat with copper tube copper fin coi.
D	1st and 2nd stage hot gas reheat with copper tube copper fin coil
E	1st stage Reheat PLUS with copper tube aluminum fin COILS
F	1st and 2nd stage Reheat PLUS with copper tube aluminum fin COILS
G	1st stage Reheat PLUS with copper tube copper fin COILS
H	1st and 2nd stage Reheat PLUS with copper tube copper fin COILS
J	1st stage liquid sub-cooling with copper tube aluminum fin coil
K	1st stage liquid sub-cooling with copper tube copper fin coil
L	1st & 2nd stage liquid sub-cooling with copper tube aluminum fin coil
M	1st & 2nd stage liquid sub-cooling with copper tube copper fin coil
X	Applied Special
0	Coil not coated
A	Coated with ADDICOAT 6000
B	Coated with Whitaker P/C 100
C	Coated with flexible dip and baked epoxy
D	Coated with Baked phenolic
X	Applied Special

Exhaust Blower Motor	
0	Standard nominal efficiency ODP motor
1	Totally enclosed motor
2	High efficiency motor
3	Totally enclosed high efficiency motor
X	Applied Special
Exhaust & Return Blower	
0	None
A	Relief damper
B	Centrifugal blower power exhaust, end discharge
C	Centrifugal blower power exhaust, Left side discharge
D	Centrifugal blower power exhaust, right side discharge
E	Return air blower with relief dampers
F	reserved
X	Applied Special

Engineering Guide Specifications

General

Furnish and install Addison Model DC (downflow) or DC (horizontal) Series A air source cooling / heating unit per plans and specifications. Capacity and Energy Efficiency shall not be less than scheduled. Unit shall be provided with factory installed options listed below. Performance ratings shall be per ARI Standard 210/240-94 or 360.

Approvals

Unit shall be design certified to conform to appropriate UL Standards by Electrical Testing Laboratories or other nationally recognized testing laboratory.

Cabinet

Cabinet shall be constructed of G-90 galvanized steel with minimum gauge thickness of: Bases - 16 gauge; Corner Posts and Tops - 18 gauge; Access Panels - 20 gauge. The interior of the indoor airside shall be thermally insulated with 1-inch thick fiberglass with an R-value of 4.2. The cabinet shall be mounted on steel rails to facilitate installation. The design of the cabinet shall allow access to the compressor and electrical panel without impairing unit operation.

Non Rust Base

Unit base pan shall be coated with a mastic compound to a uniform ¼" wet depth and air dried to prevent rain or condensate from contacting steel on the bottom of the base pan.

Paint Finish. Constructed of hot dipped galvanized G90 steel that is chemically treated with zinc phosphate, coated with 0.2 to 0.3 MIL polyurethane primer then finished with .07 to .08 MIL polyester top coat. Finish shall meet or exceeds 1,000 hour Salt Spray Test per ASTM B117 97.

Non-Corroding Hardware.

All exterior nuts, bolts and washers shall be stainless steel type 304. All exterior screws shall be either stainless steel type 304 or coated with Magnigard Silver 17, and shall withstand a minimum of 4,000 hours Salt Spray Test per ASTM B117 97.

Assembly and Test

The unit shall be completely factory assembled, prewired and thoroughly leak and safety control tested. After assembly, each unit shall be charged and run tested.

Refrigerant System

The refrigerant system(s) shall include the compressor, crankcase heater, oil pressure failure protection on accessible hermetic compressors, copper tube- aluminum plate-finned condenser and evaporator air coils and accumulator. The refrigerant circuit shall include the filter-drier, high pressure safety control (manual-reset), low pressure safety control/loss of charge protector (auto-reset), sight glass-moisture indicator, dual gauge connections for high and low pressure readings, and thermal expansion valve with adjustable superheat.

Safety controls shall include an anti-short cycle timer (on lead compressor on multi-compressor models). Multiple compressor models shall have face split coils for maximum dehumidification at part load cooling conditions.

Compressor shall be warranted by manufacturer for 5 years from date of installation.

Sloped Stainless Steel Condensate Drain Pan. The condensate drain pan shall be sloped to comply with ASHRAE Standard 62-1089R and fabricated from stainless steel. The bottom shall then be insulated with 1" fiberglass insulation. The drain pan shall be furnished with single or dual MPT drain fittings positioned at the exterior of the cabinet.

Electrical Controls

The unit shall include a mounted control panel with all power connections prewired to a single terminal block. All indicated safety and operating controls shall be factory mounted and tested. The internally wired electrical controls shall include contactors or starters required for automatic operation. The 24 volt control circuit shall include a transformer and terminal board. On dual compressor units, a safety control trip of the lead compressor shall not prevent the lag compressor from operating.

Heating section:

Electric Heat

Electric Heaters shall include safeties per UL and NEC. Heat capacity and stages shall be as specified on the schedules. Unit shall be single point power termination.

Gas Heat

Furnace shall be indirect gas fired heating, which is 80% thermally efficient. Unit to be equipped for use with natural gas and include an integral power vent system. Gas furnace shall have (aluminized steel heat exchanger with aluminized steel burners and bottom pan), (409 stainless steel heat exchanger with 409 stainless steel burners and bottom pan), (321 stainless steel heat exchanger with 409 stainless steel burners and bottom pan). Controls shall be (one or two) stage; electronic modulation to 50% and shall include (high), (low) pressure safety switches.

Hot Water Coil

Water Coil shall be (one or two) row(s) with connections stubbed off inside the cabinet. Coil face area shall be equivalent to cooling coil. Coil shall include drain and vent.

Air Side

Condenser

The direct drive condenser air fans designed for vertical air discharge shall be driven by inherently protected sealed ball bearing fan motors.

Evaporator

A forward curved; statically and dynamically balanced DWDI centrifugal blower(s) shall used for evaporator air. Blower wheels shall be fabricated of galvanized or galvalume steel. Blower housings shall be fabricated of galvanized or epoxy coated steel. The blower wheel(s) shall be mounted on a solid steel shaft supported by sealed ball bearings. The shaft shall be driven by adjustable belt drive sheaves connected to a 1725-rpm motor with sealed ball bearings. The sealed bearings on both the blower shaft and motor shall not require lubrication.

Engineering Guide Specifications Continued

Reheat Section

One row heat reclaim coil shall be furnished with one stage control.

Energy Recovery Section

Energy Conservation Wheel shall include motor and drive. Performance shall be as scheduled.

Outside Air/Economizer Section

Dampers shall be (manual)(motorized) and shall include intake hood with bird screen.

Filter Section.

1 or 2 inch thick disposable glass fiber media filters shall be mounted in the factory installed flat filter rack on the return air opening.

Option Check List

Phase/Voltage Monitor.

Manual Outside Air Damper.

Motorized Outside Air Damper.

Motorized Proportional Outside Air Damper.

Economizer with (outdoor changeover control) or (enthalpy control) (wall mounted minimum position potentiometer) (remote changeover switch).

Time Delay Relay between dual compressor units.

Return Air 135°F Firestat.

Non-Fused Disconnect factory mounted and wired.

Filters to be one inch (deep pleat) (cleanable metal mesh) or two inch (disposable) (deep pleat) (cleanable metal mesh).

Clogged Filter Indicator.

Heat Recovery Water Heater. (Desuperheater)

Seacoast Construction or Mill & Chemical Service Option.

Coils Coated with Whitaker P/C100, ADDICOAT 6000™ or baked phenolic.

Stainless Steel (409) heat exchanger and burners.

Copper-Fins, Copper Tube coils.

Outdoor Air Coil Guards.

Hot Gas Bypass.

Low Ambient Head Pressure Control.

Hot Water Coil.

Hot Gas Reheat Circuit and Coil.

Reheat Plus™. (Liquid Subcool/Reheat Coil)

High Efficiency Blower Motor.

Quick Release Handles.

Convenience Outlet. (115 V.)

VARISPEED™ Head Pressure Control.

Engineered Options

A variety of special options can be made available as Applied Specials for specific models on specific applications. Such options include, but are not limited to the following:

Variable frequency drive - supply.

Variable frequency drive - exhaust.

Belt driven condenser blowers.

Face and bypass heat exchanger.

Semi-hermetic compressors.

Hot gas reheat on both circuits of dual circuit models

Hot gas bypass on both circuits of dual circuit models.

6 row DX evaporator coil.

Sensible energy recovery wheel.

Installation Code and Annual Inspections:

All installations 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 per