

Now In Production

FEBRUARY 2011

Gaston Memorial Hospital, Gaston, NC

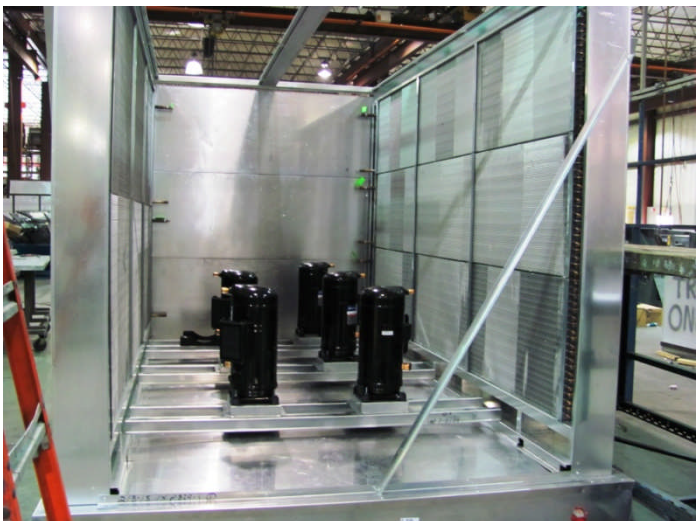
One (1) 62 ton custom air cooled **dual path** system, with DX cooling coil, sub-cool reheat coils, hot gas reheat coil, digital scroll compressors, **R-410a** refrigerant and gas heat section.

Representative : Carolina Cooling. 801 Pressley Rd., Suit 100 B, Charlotte, NC 28217

Bob Alexy; P 704-521-2665; F 704-521-4444



The unit consist of two paths (two air streams), outside air path and the return air path. Each path has its own independent compressors, condenser coils, evaporator coils and sub-cool reheat coils. A hot gas re-heat coil is installed down stream of the mixing plenum for re-heat when needed. Both paths condition the air down to 41 deg dew point.



There are a total of five (5) scroll compressors, two of the compressors have digital capability (10 to1 modulation) . The air cooled condensing section is design for 105 deg F ambient with R-410a refrigerant.



4500 Industrial Access Road Douglasville, GA 770-489-0716 P ; 770-489-2938 F ; www.seasons4.net



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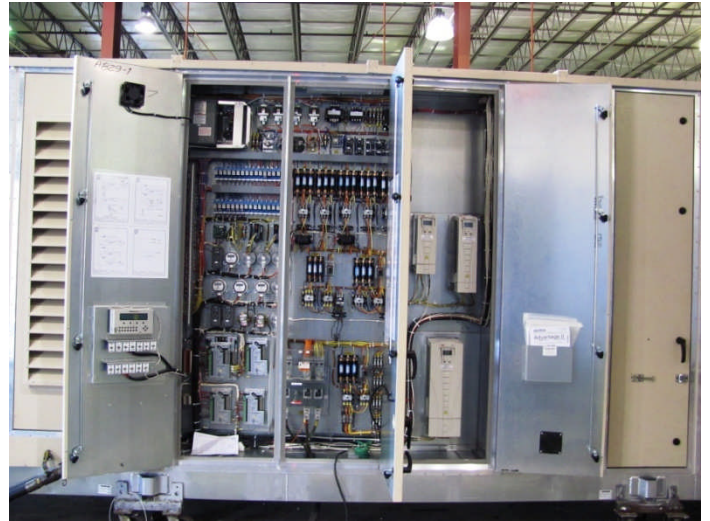
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Heatco tubular gas burners, airfoil plenum blowers, premium efficiency blower motors, ABB drives, UV lights, HEPA filters, airflow measuring stations and DDC controls are some of the features provided.



The unit is cased with Kynar coated aluminum exterior panels and insulated with 2" polyurethane foam insulation. The unit is completely tested and shipped to its destination.



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ENGINEERING SPECIFICATIONS

JOB NAME	GASTON MEMORIAL HOSPITAL
LOCATION	GASTONIA, NC
DATE PREPARED	Revised: 12/14/10
SEASONS-4 REFERENCE #	A829
UNIT MODEL #	3HJK47-0625-TN3.5-12GC
UNIT DESIGNATION	AHU-2
SYSTEM VOLTAGE	460/3/60

DESIGN DATA

TOTAL COOLING CAPACITY (BTUH)	884,024
SENSIBLE CAPACITY (BTUH)	538,306
TOTAL AIRFLOW (CFM)	11,600
NET TOTAL COOLING CAPACITY (BTUH)	707,327*
NET SENSIBLE CAPACITY (BTUH)	361,609*
UNIT LEAVING AIR TEMP (FDB/FWB)	60.9/50.0**
ESTIMATED REFRIGERANT CHARGE (LBS. R410A)	385

* DESIGN DATA CAPACITIES INCLUDE EFFECTS OF SUBCOOL COIL REHEAT

** WITH MODULATING HOT GAS REHEAT TO MAINTAIN SPECIFIED DISCHARGE

COMPRESSOR SECTION

COMPRESSOR:

TYPE	COPELAND SCROLL
NUMBER	5
STAGES OF CAPACITY	5

AIR COOLED CONDENSER SECTION

CONDENSER COIL:

COIL FACE AREA/ROWS/FPI	136.5/6/10
DESIGN AMBIENT TEMPERATURE (FDB):	105.0

CONDENSER FANS:

TYPE	PROPELLER
DIA/RPM	30/1,140
QTY/HP	8/1.5

COOLING SYSTEM 2 PRECOOL

FACE AREA (SQ-FT)	9.4
ROWS/FPI	4/12
COIL CIRCUITS (NUMBER)	1
TOTAL CAPACITY (BTUH)	214,500
SENSIBLE CAPACITY (BTUH)	148,901
ENTERING AIR TEMP (FDB/FWB)	105.0/79.0
COIL LEAVING AIR TEMP (FDB/FWB)	66.5/63.0
CONDITIONED AIR (CFM)	3,500

ENGINEERING SPECIFICATIONS

COOLING SYSTEM 1 DEHUMIDIFICATION

FACE AREA (SQ-FT)	9.4
ROWS/FPI	8/12
COIL CIRCUITS (NUMBER)	1
TOTAL CAPACITY (BTUH)	199,033
SENSIBLE CAPACITY (BTUH)	96,223
ENTERING AIR TEMP (FDB/FWB)	66.5/63.0
COIL LEAVING AIR TEMP (FDB/FWB)	41.4/41.3
CONDITIONED AIR (CFM)	3,500

SUBCOOLING COIL SECTION F/SYSTEM 1 DEHUMIDIFICATION

FACE AREA (SQ-FT)	9.4
ROWS/FPI	1/12
COIL CIRCUITS (NUMBER)	1
REHEAT CAPACITY (BTUH)	42,086
ENTERING AIR TEMP (FDB/FWB)	41.4/41.3
LEAVING AIR TEMP (FDB/FWB)	52.5/46.8
CONDITIONED AIR (CFM)	3,500

HOT GAS REHEAT COIL SECTION F/SYSTEM 1 DEHUMIDIFICATION

FACE AREA (SQ-FT)	21.8
ROWS/FPI	2/10
COIL CIRCUITS (NUMBER)	1
REHEAT CAPACITY (BTUH)	196,752
ENTERING AIR TEMP (FDB/FWB)	50.3/45.1
LEAVING AIR TEMP (FDB/FWB)	65.9/52.2
CONDITIONED AIR (CFM)	11,600

COOLING SYSTEM 3 RETURN AIR

FACE AREA (SQ-FT)	20.8
ROWS/FPI	8/12
COIL CIRCUITS (NUMBER)	3
TOTAL CAPACITY (BTUH)	470,492
SENSIBLE CAPACITY (BTUH)	293,182
ENTERING AIR TEMP (FDB/FWB)	72.7/62.2
COIL LEAVING AIR TEMP (FDB/FWB)	39.6/39.4
CONDITIONED AIR (CFM)	8,100

SUBCOOLING COIL SECTION F/SYSTEM 3 RETURN AIR

FACE AREA (SQ-FT)	20.8
ROWS/FPI	1/12
COIL CIRCUITS (NUMBER)	3
REHEAT CAPACITY (BTUH)	86,355
ENTERING AIR TEMP (FDB/FWB)	39.6/39.4
LEAVING AIR TEMP (FDB/FWB)	49.4/44.4
CONDITIONED AIR (CFM)	8,100

SUPPLY AIR BLOWER SECTION

TYPE	AF SWSI PLENUM
NUMBER/SIZE	1/27"
AIRFLOW (CFM)	11,600
TOTAL STATIC PRESSURE (TSP) IN WC	7.00
EXTERNAL STATIC (ESP) IN WC	2.50
DESIGN FAN SPEED (RPM)	1,742
FAN BHP (INCLUDING DRIVE LOSSES)	17.6
MOTOR HP	20.0
MOTOR DRIVE	FIXED SHEAVE

ENGINEERING SPECIFICATIONS

RETURN AIR BLOWER SECTION

TYPE	AF SWSI PLENUM
NUMBER/SIZE	1/30"
AIRFLOW (CFM)	10,300
TOTAL STATIC PRESSURE (TSP) IN WC	1.25
EXTERNAL STATIC (ESP) IN WC	0.75
DESIGN FAN SPEED (RPM)	825
FAN BHP (INCLUDING DRIVE LOSSES)	3.1
MOTOR HP	5.0
MOTOR DRIVE	FIXED SHEAVE

OA FILTER SECTION

TYPE	2" PLEATED; MERV 8
NUMBER/SIZE	2/16x20, 2/16x25
TOTAL FACE AREA (SQ-FT)	10.0
FACE VELOCITY (FPM)	350

RA FILTER SECTION

TYPE	2" PLEATED; MERV 8
NUMBER/SIZE	8/16x25
TOTAL FACE AREA (SQ-FT)	22.2
FACE VELOCITY (FPM)	365

MAIN PRE-FILTER SECTION

TYPE	2" PLEATED; MERV 8
NUMBER/SIZE	10/16x20, 10/16x25
TOTAL FACE AREA (SQ-FT)	50.0
FACE VELOCITY (FPM)	232

FINAL FILTER SECTION

TYPE	12" CARTRIDGE MERV 17 (HEPA)
NUMBER/SIZE	9/24x24
TOTAL FACE AREA (SQ-FT)	36.0
FACE VELOCITY (FPM)	322

GAS HEAT SECTION

TYPE	NATURAL GAS; TUBULAR DUCT FURNACE
INPUT CAPACITY (BTUH)	350,000
OUTPUT CAPACITY (BTUH)	280,000
CONDITIONED AIR (CFM)	11,600
CONDITIONED AIR TR (F)	22
STAGING	MODULATING
GAS CONNECTION SIZE (MPT)	3/4"
MIN GAS PRESSURE (IN-WC)	7"
MAX GAS PRESSURE (IN-WC)	14"

UNIT WEIGHT (LBS) 17,150

**ENGINEERING SPECIFICATIONS
ELECTRICAL DATA**

JOB NAME GASTON MEMORIAL HOSPITAL

LOCATION GASTONIA, NC

DATE PREPARED Revised: 12/14/10

SEASONS-4 REF NUMBER A829 **UNIT MODEL** 3HJK47-0625-TN3.5-12GC

UNIT DESIGNATION AHU-2

SYSTEM VOLTAGE 460 **CONTROL VOLTAGE** 120 **EXT. VOLTAGE** 24

<u>ITEM</u>	<u>QTY</u>	<u>HP</u>	<u>FLA</u>	<u>LRA</u>	<u>KW</u>	<u>TYPE</u>
COMP 2 PRECOOL	1	***	30.0	173.0	14.9	ZP182KCE
COMP 1 DEHUMID	1	***	30.0	173.0	14.5	ZPD182KCE
COMP 3 RETURN AIR	1	***	25.7	150.0	12.5	ZPD154KCE
COMP 4 & 5 RETURN AIR	2	***	25.7	150.0	12.4	ZP154KCE
COND FAN	8	1.5	2.7	16.2	1.4	
SA FAN	1	20.0	23.5	160.8	14.1	Bald
RA FAN	1	5.0	6.6	51.0	2.6	Bald
CONTROL CIRCUIT			2.2			
CONVENIENCE OUTLET			6.5			
<hr/>						
TOTALS (COOL)	15	***	197.5		94.7	
TOTALS (HEAT)	2	25.0	38.8		16.7	

M.C.A. 205 (MINIMUM CIRCUIT AMPACITY)

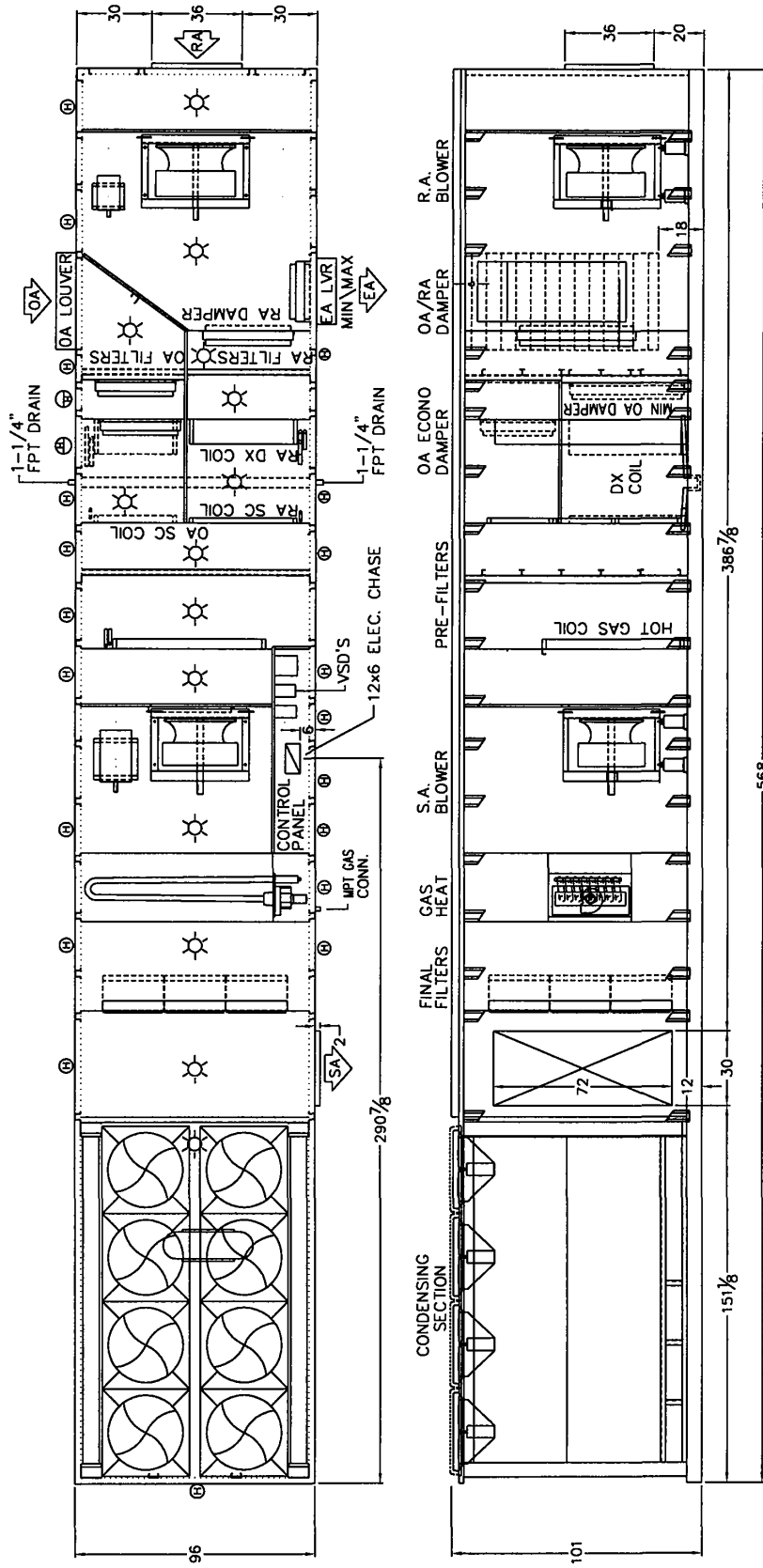
M.O.P. 225 (MAXIMUM OVERLOAD PROTECTION)

S.C.C.R. 65,000 (SHORT CIRCUIT CURRENT RATING)



SEASONS 4

ENGINEERING AND MANUFACTURING HVAC EQUIPMENT SINCE 1971



LEGEND

①	HINGED ACCESS DOOR
②	LIFT-OFF ACCESS DOOR
③	BALANCING DAMPER

NOTE: O.A./E.A. LOUVERS, FURNACE VENT CAPS, ETC. MAY REQUIRE FIELD INSTALLATION

REV. #	BY	DATE	DESCRIPTION	DIMENSIONAL DATA			
0	CCB	12/06/2010	ORIGINAL ISSUE	GASTON MEMORIAL HOSP GASTONIA, NC AHU-2			
1	CCB	12/10/2010	OA/EA, CONTROL PANEL AND FURNACE SWAPPED SIDES				
2	CCB	12/10/2010	REMOVED ONE OF THE TWO DISCHARGE AIR OPENINGS				
3	TDM	12/14/2010	ADDED DOORS & LIGHTS. RELOCATED OA ECONO DAMPER.				
				DRAWN BY	CCB		
				DATE	12/6/2010		
				SCALE	N/A		
				REVISION #	3		
				DWG. NAME	A829D01CB		

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