



Now In Production

SEPTEMBER 2009

Cannon Middle School, Las Vegas, NV

Eleven (11) **green** multi-zone and single zone custom replacement units ranging from 15 tons up to 54 tons. Water cooled condensing sections, digital scroll compressors, **R-410A** refrigerant, twin direct drive supply and return air blowers with VFDs, and DDC controls.

**Representative : Johnson Controls; 3645 W. Oquendo, Suite 400, Las Vegas, NV 89118
Chris Jordan, P 702-222-0415; F 702-222-1034 ;**

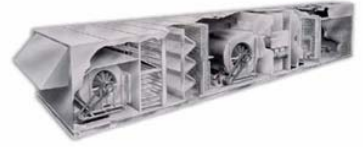


The galvanized steel base and floors are completely welded. The units are provided with conditioned condensing sections with water- cooled shell and tube condensers, digital scroll compressors, and R-410A refrigerant. A water-cooled pre-cooling coil is located in the minimum outside air path to pre-cool the outside air. The coil is piped to the water cooled condensing section.



Twin direct drive supply and return air blowers with premium efficiency TEFC motors and VFDS, airflow measuring stations, UV lights, and vapor proof service lights are some of the features provided.





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Each unit is provided with multiple Heatco gas burners with stainless steel heat exchangers, high efficiency 12" deep Merv 11 filters, DDC controls, storm proof louvers, individual motor overload protection and disconnect on each motor, and photoelectric supply and return air smoke detectors.



Aluminum Kynar painted exterior panels, 2" foam insulation with R value of 13, hinged access doors with viewports, and single door handles are some of the features.

The units are tested and shipped to the job site for installation.



ENGINEERING SPECIFICATIONS

JOB NAME	CANNON MIDDLE SCHOOL
LOCATION	LAS VEGAS, NV
DATE PREPARED	Revised: 05/22/09
SEASONS-4 REFERENCE #	A424-01
UNIT MODEL #	6MJI39-0514-TN4.5-13SE
UNIT DESIGNATION	MZ-1
SYSTEM VOLTAGE	460/3/60

DESIGN DATA

TOTAL COOLING CAPACITY (BTUH)	616,668
SENSIBLE CAPACITY (BTUH)	616,668
TOTAL AIRFLOW (CFM)	13,155
OUTDOOR AIR (CFM)	5,640 - 13,155
ESTIMATED REFRIGERANT CHARGE (LBS. R410A)	130

COMPRESSOR SECTION

COMPRESSOR:

TYPE	COPELAND SCROLL (TANDEM)
NUMBER	4(2 TANDEM SETS)
STAGES OF CAPACITY	4 (LEAD COMPRESSOR IS A DIGITAL SCROLL)

WATER CONDENSER SECTION

TYPE HX/QTY	SHELL & TUBE TYPE / 2
TOTAL HEAT REJECTED (BTUH)	570,000
TYPE FLUID	Water
ENTERING FLUID TEMP (F)	83.0
DESIGN FLUID TD (F)	12.5
MAX FLUID PRESSURE DROP (FT)	10.0
FLUID FLOW RATE-TOTAL (GPM)	96.0

PRE-COOL COIL SECTION

FACE AREA (SQ-FT)	24.4
ROWS/FPI	3/10
COIL CIRCUITS (NUMBER)	1
TOTAL CAPACITY (BTUH)	289,353
SENSIBLE CAPACITY (BTUH)	289,353
ENTERING AIR TEMP (FDB/FWB)	86.3/59.0
COIL LEAVING AIR TEMP (FDB/FWB)	64.4/50.6
CONDITIONED AIR (CFM)	13,155

DEHUMIDIFICATION COIL SECTION

FACE AREA (SQ-FT)	24.4
ROWS/FPI	4/10
COIL CIRCUITS (NUMBER)	1
TOTAL CAPACITY (BTUH)	179,358
SENSIBLE CAPACITY (BTUH)	179,358
ENTERING AIR TEMP (FDB/FWB)	64.4/50.6
COIL LEAVING AIR TEMP (FDB/FWB)	50.9/44.6
CONDITIONED AIR (CFM)	13,155

ENGINEERING SPECIFICATIONS

OUTSIDE AIR PRE-COOL COIL SECTION

FACE AREA (SQ-FT)	12.2
ROWS/FPI	8/10
COIL CIRCUITS (NUMBER)	1
CAPACITY (BTUH)	147,957
ENTERING AIR TEMP (FDB/FWB)	115.0/66.0
LEAVING AIR TEMP (FDB/FWB)	88.9/57.3
CONDITIONED AIR (ACFM)	5,640
ENTERING WATER TEMP (DEG F)	83.0
LEAVING WATER TEMP (DEG F)	98.6
FLOWRATE (GPM)	19.0
TYPE FLUID	WATER
FLUID PRESSURE DROP (FT WATER)	3.59
SUPPLY/RETURN CONNECTION SIZE	1 3/8, 1 3/8

SUPPLY AIR BLOWER SECTION

TYPE	AF SWSI PLENUM
NUMBER/SIZE	2/24.5" (78% WHEEL WIDTH)
AIRFLOW (CFM)	13,155
TOTAL STATIC PRESSURE (TSP) IN WC @ ALTITUDE	3.35
EXTERNAL STATIC (ESP) IN WC @ ALTITUDE	0.75
DESIGN FAN SPEED (RPM)	1,473
FAN BHP (INCLUDING DRIVE LOSSES)	2 @ 4.86
MOTOR HP	2 @ 7.5
MOTOR DRIVE	DIRECT DRIVE

RETURN AIR BLOWER SECTION

TYPE	AF SWSI PLENUM
NUMBER/SIZE	2/22.5" (96% WHEEL WIDTH)
AIRFLOW (CFM)	13,155
TOTAL STATIC PRESSURE (TSP) IN WC	1.00
EXTERNAL STATIC (ESP) IN WC	0.50
DESIGN FAN SPEED (RPM)	1,241
FAN BHP (INCLUDING DRIVE LOSSES)	2 @ 1.89
MOTOR HP	2 @ 5
MOTOR DRIVE	ADJUSTABLE SHEAVE

MAIN FILTER SECTION

TYPE	12" CARTRIDGE (90-95% EFFICIENCY)
NUMBER/SIZE	6/24x24, 2/12x24
TOTAL FACE AREA (SQ-FT)	28.0
FACE VELOCITY (FPM)	470

OA FILTER SECTION

TYPE	12" CARTRIDGE (90-95% EFFICIENCY)
NUMBER/SIZE	2/25x20, 2/20x20
TOTAL FACE AREA (SQ-FT)	12.5
FACE VELOCITY (FPM)	451

GAS HEAT SECTION

TYPE	NATURAL GAS; TUBULAR DUCT FURNACE
INPUT CAPACITY (BTUH @ SEALEVEL)	450,000
OUTPUT CAPACITY (BTUH @ ALTITUDE)	328,320
CONDITIONED AIR (CFM)	13,155
CONDITIONED AIR TR (F)	25
STAGING	MODULATING
GAS CONNECTION SIZE (MPT)	1"

ENGINEERING SPECIFICATIONS

MIN GAS PRESSURE (IN-WC)	7"
MAX GAS PRESSURE (IN-WC)	14"

UNIT WEIGHT (LBS) 15,350

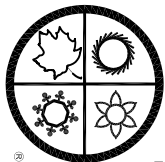
ENGINEERING SPECIFICATIONS

ELECTRICAL DATA

JOB NAME CANNON MIDDLE SCHOOL
LOCATION LAS VEGAS, NV
DATE PREPARED Revised: 05/22/09
SEASONS-4 REF NUMBER A424-01 **UNIT MODEL** 6MJI39-0514-TN4.5-13SE
UNIT DESIGNATION MZ-1

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>
PRE-COOL CKT. # 2	2	***	20.0	125.0	8.0	ZP120KCE
DEHUMID COMP. # 1	2	***	13.6	100.0	5.6	ZP83KCE
SA FAN	2	7.5	9.6	61.0	4.0	Bald
RA FAN	2	5.0	6.6	51.0	1.6	Bald
CONTROL CIRCUIT			3.3			
CONVENIENCE OUTLET			6.5			20 Amps
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TOTALS (COOL)	8	***	109.4		38.3	
TOTALS (HEAT)	4	25.0	42.2		11.0	

M.C.A. (MINIMUM CIRCUIT AMPACITY)
M.O.P. (MAXIMUM OVERLOAD PROTECTION)
S.C.C.R. (SHORT CIRCUIT CURRENT RATING)

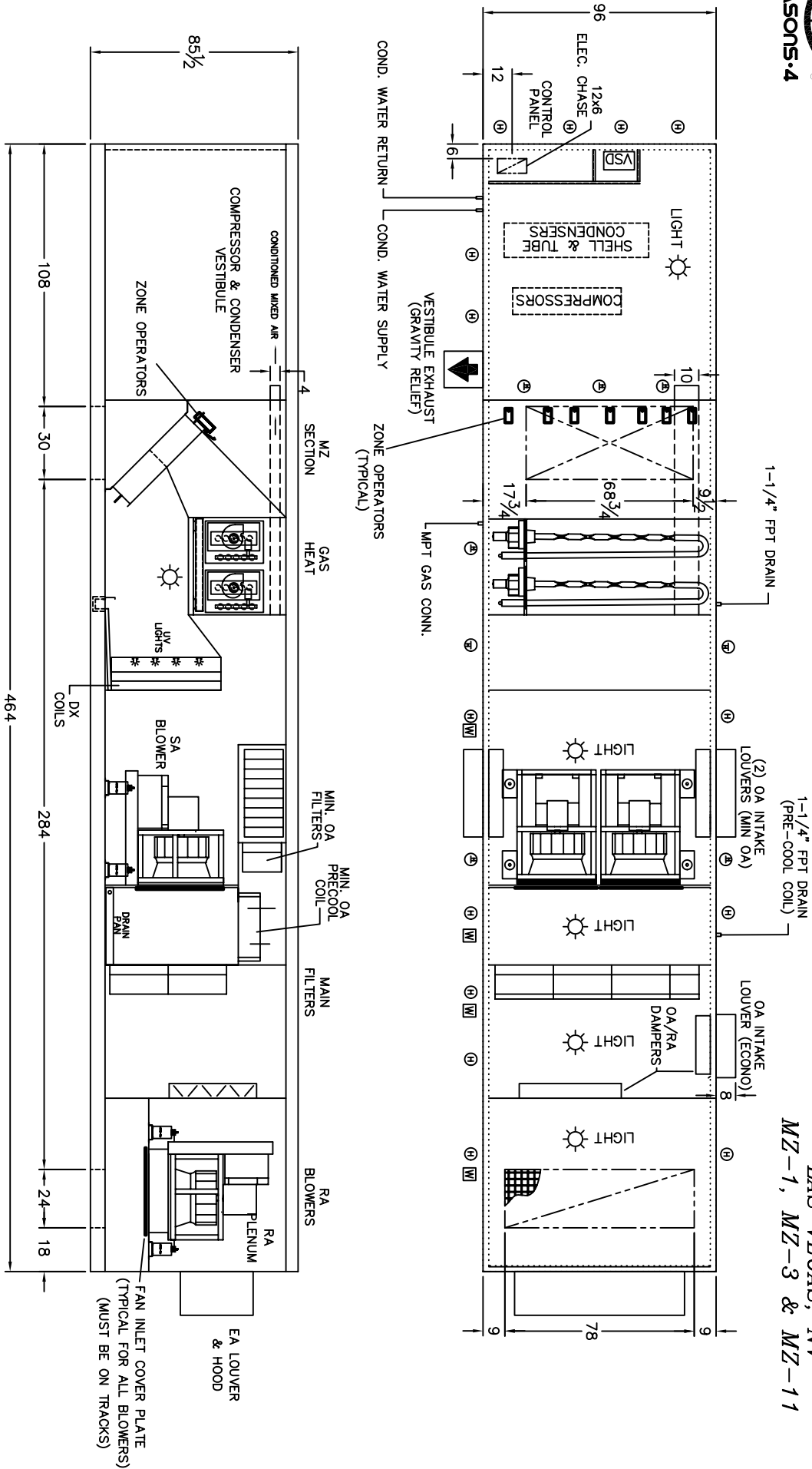


SEASONS-4

ENGINEERING AND MANUFACTURING HVAC EQUIPMENT SINCE 1971

DIMENSIONAL DATA

CANNON MIDDLE SCHOOL
LAS VEGAS, NV
MZ-1, MZ-3 & MZ-11



- Ⓜ HINGED DOOR WINDOW (VIEW/PORT)
- Ⓢ HINGED DOOR TOP & BOTTOM SCREW-ON PANEL

- ALL THE FILTERS IN THE UNIT WILL BE SIDE LOADED.
- THE CABINET'S VESTIBULE WILL BE CONDITIONED BY MIXED AIR; OPENING SIZE IS 10" X 4"

NOTE: O.A./E.A. LOUVERS, FURNACE VENT CAPS, ETC. MAY REQUIRE FIELD INSTALLATION
 4500 INDUSTRIAL ACCESS ROAD • DOUGLASVILLE, GEORGIA 30134-3949 • 770/489-0716 • FAX 770/489-2938

REVISION 9: 08/26/09 SPP
 04/13/2009 SPP A424D01SP