

Now In Production

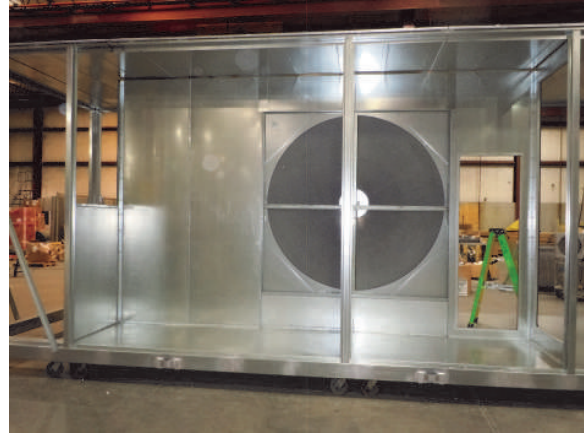
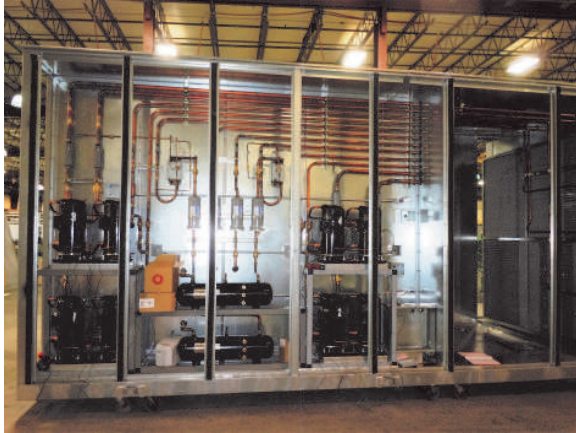
October 2017

The Buffalo News – Print Room

Two Seasons 4 direct replacement units for curb mounted Aaon135-ton air-cooled units installed in 2001. The new units are equipped with 104-ton DX/Evaporative condenser section and energy recovery wheel for higher efficiency. Eight scroll compressors with R-410a refrigerant and hot gas reheat. Supply fan section is a four (4) fan array, dual SWSI plenum return/exhaust blowers, 15.2 EER

Installing Design Build Contractor: John W. Danforth Company

Representative: R.L. Kistler, Buffalo, NY; 585-738-2232



N
O
W

I
N

P
R
O
D
U
C
T
I
O
N



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

Now In Production

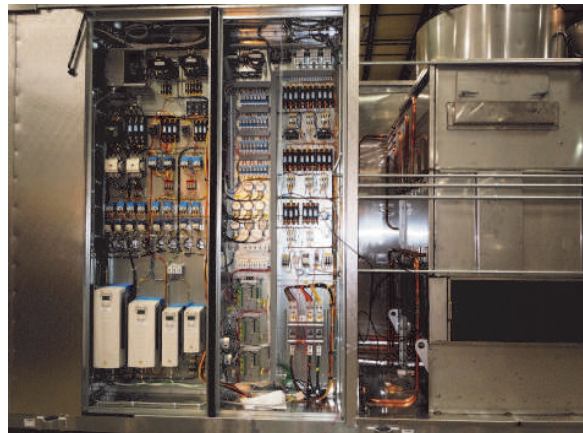
October 2017

The Buffalo News – Print Room

Two Seasons 4 direct replacement units for curb mounted Aeon135-ton air-cooled units installed in 2001. The new units are equipped with 104-ton DX/Evaporative condenser section and energy recovery wheel for higher efficiency. Eight scroll compressors with R-410a refrigerant and hot gas reheat. Supply fan section is a four (4) fan array, dual SWSI plenum return/exhaust blowers, 15.2 EER

Installing Design Build Contractor: John W. Danforth Company

Representative: R.L. Kistler, Buffalo, NY; 585-738-2232



N
O
W

I
N

P
R
O
D
U
C
T
I
O
N



ENGINEERING SPECIFICATIONS

JOB NAME BUFFALO NEWS
LOCATION BUFFALO, NY
DATE PREPARED 07/03/2017
SEASONS-4 REFERENCE # C650
UNIT MODEL # VE100 / 6EMR55-1048-XXXXX-31EW
UNIT DESIGNATION ERU-1 & 2
SYSTEM VOLTAGE 460/3/60

DESIGN DATA

TOTAL COOLING CAPACITY (BTUH)	1,249,768
SENSIBLE CAPACITY (BTUH)	980,214
LATENT CAPACITY (BTUH)	269,554
TOTAL AIRFLOW (CFM)	31,000
OUTDOOR AIR (CFM)	12,000
RETURN AIR (CFM)	19,000
OUTDOOR AIR TEMP (FDB/FWB)	94.0/74.0
FAN MOTOR HEAT (BTUH)	122,150
UNIT LEAVING AIR TEMP (FDB/FWB/GRAINS)	52.9/50.8
ESTIMATED REFRIGERANT CHARGE (R410A)	300.0
UNIT EER (REF AHRI 340/360)	15.2*

* EER CALCULATION DOES NOT INCLUDE THE ENERGY RECOVERY WHEEL PER AHRI-340/360

COMPRESSOR SECTION

COMPRESSOR:

TYPE	COPELAND SCROLL (TANDEM)
NUMBER	8
STAGES OF CAPACITY	Modulating

EVAPORATIVE CONDENSER

FANS (NUMBER/HP)	2/5
AIRFLOW (CFM)	18,500
PUMPS (NUMBER/HP)	1/1.5

COOLING COIL SECTION

FACE AREA (SQ-FT)	58.3
ROWS/FPI	6/10
COIL CIRCUITS (NUMBER)	4
TOTAL CAPACITY (BTUH)	1,249,768
SENSIBLE CAPACITY (BTUH)	980,214
ENTERING AIR TEMP (FDB/FWB)	81.6/64.7
COIL LEAVING AIR TEMP (FDB/FWB)	52.8/50.7
CONDITIONED AIR (CFM)	31,000
AIR PRESSURE DROP	0.59

HGR SECTION

FACE AREA (SQ-FT)	50.00
ROWS/FPI	4/6
COIL CIRCUITS (NUMBER)	2

ENGINEERING SPECIFICATIONS

REHEAT CAPACITY (BTUH)	749,786
ENTERING AIR TEMP (FDB/FWB)	52.8/50.8
LEAVING AIR TEMP (FDB/FWB)	75.0/59.7
CONDITIONED AIR (CFM)	31,000
AIR PRESSURE DROP	0.26

SUPPLY AIR BLOWER SECTION

TYPE	AF SWSI PLENUM (65% WHEEL WIDTH)
NUMBER/SIZE	4/27"
AIRFLOW (CFM)	31,000
CLASS	II
TOTAL STATIC PRESSURE (TSP) IN WC	6.75
EXTERNAL STATIC (ESP) IN WC	3.50
DESIGN FAN SPEED (RPM)	1,755
FAN BHP	4 @ 11.2
MOTOR HP	4 @ 15.00
MOTOR DRIVE	DIRECT DRIVE W/ VFD

MAIN FILTER SECTION

TYPE	2" Pleated; MERV 8
NUMBER/SIZE	24/20x24
TOTAL FACE AREA (SQ-FT)	80.0
FACE VELOCITY (FPM)	388

OA FILTER SECTION

TYPE	2" Pleated; MERV 8
NUMBER/SIZE	8/20x24
TOTAL FACE AREA (SQ-FT)	26.7
FACE VELOCITY (FPM)	450

EA FILTER SECTION

TYPE	4" Pleated; MERV 14
NUMBER/SIZE	8/20x24
TOTAL FACE AREA (SQ-FT)	26.7
FACE VELOCITY (FPM)	450

ENERGY RECOVERY WHEEL

SIZE	78 in dia / 7.874 in deep
SUPPLY AIRFLOW (SCFM)	12,000
RETURN AIRFLOW (SCFM)	12,000
PURGE AIRFLOW (SCFM)	-432
SUMMER ENTERING AIR TEMP (FDB/FWB)	94.0/74.0
SUMMER LEAVING AIR TEMP (FDB/FWB)	80.7/65.6
WINTER ENTERING AIR TEMP (FDB/FWB)	-3.0/-4.0
WINTER LEAVING AIR TEMP (FDB/FWB)	39.4/37.7
EFFECTIVENESS (%)	0.73
PRESSURE DROP (IN-WC)	0.95

EXHAUST AIR BLOWER SECTION

TYPE	AF SWSI PLENUM (100% WHEEL WIDTH)
NUMBER/SIZE	2/27"
AIRFLOW (CFM)	31,000
CLASS	II

ENGINEERING SPECIFICATIONS

TOTAL STATIC PRESSURE (TSP) IN WC	3.50
DESIGN FAN SPEED (RPM)	1,664
FAN BHP	2 @ 13.0
MOTOR HP	2 @ 15.00
MOTOR DRIVE	DIRECT DRIVE W/ VFD

UNIT SECTION WEIGHTS (LBS)

CONDENSER END	15,886
ENERGY RECOVERY END	9,864

UNIT WEIGHT (LBS)	25,750
UNIT OPERATING WEIGHT (LBS)	27,750



ENGINEERING SPECIFICATIONS

ELECTRICAL DATA

JOB NAME

BUFFALO NEWS

LOCATION:

BUFFALO, NY

DATE PREPARED

07/03/2017

SEASONS-4 REF #

C650

UNIT MODEL #

VE100 / 6EMR55-1048-XXXXX-31EW

UNIT DESIGNATION

ERU-1 & 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 1	2	***	18.6	125.0	8.8	ZPD137KCE
COMP 1 (TDM)	2	***	18.6	125.0	8.9	ZP137KCE
COMPS 2,3,4	4	***	18.6	125.0	8.8	ZP137KCE
EVAP COND FAN	2	5.0	6.8	46.0	4.5	
EVAP COND PUMP	1	1.5	2.6	20.0	1.5	
EVAP COND SUMP HTR	1		11.9		4.0	
SA FAN	4	15.0	17.7	118.0	9.0	Baldor Super-E
EA FAN	2	15.0	20.5	116.0	10.6	Baldor Super-E
ER WHEEL	1	0.5	1.0	10.8	0.5	GSTD
CONTROL CIRCUIT			3.3			
CONTROL CIRCUIT (EXTRA)			3.3			
CONVENIENCE OUTLET			3.3			10 Amps
TOTALS (COOL)	18	***	287.6		138.5	
TOTALS (HEAT)	8	90.5	134.5		61.4	

M.C.A.

293

(MINIMUM CIRCUIT AMPACITY)

M.O.P.

300

(MAXIMUM OVERCURRENT PROTECTION)

S.C.C.R.

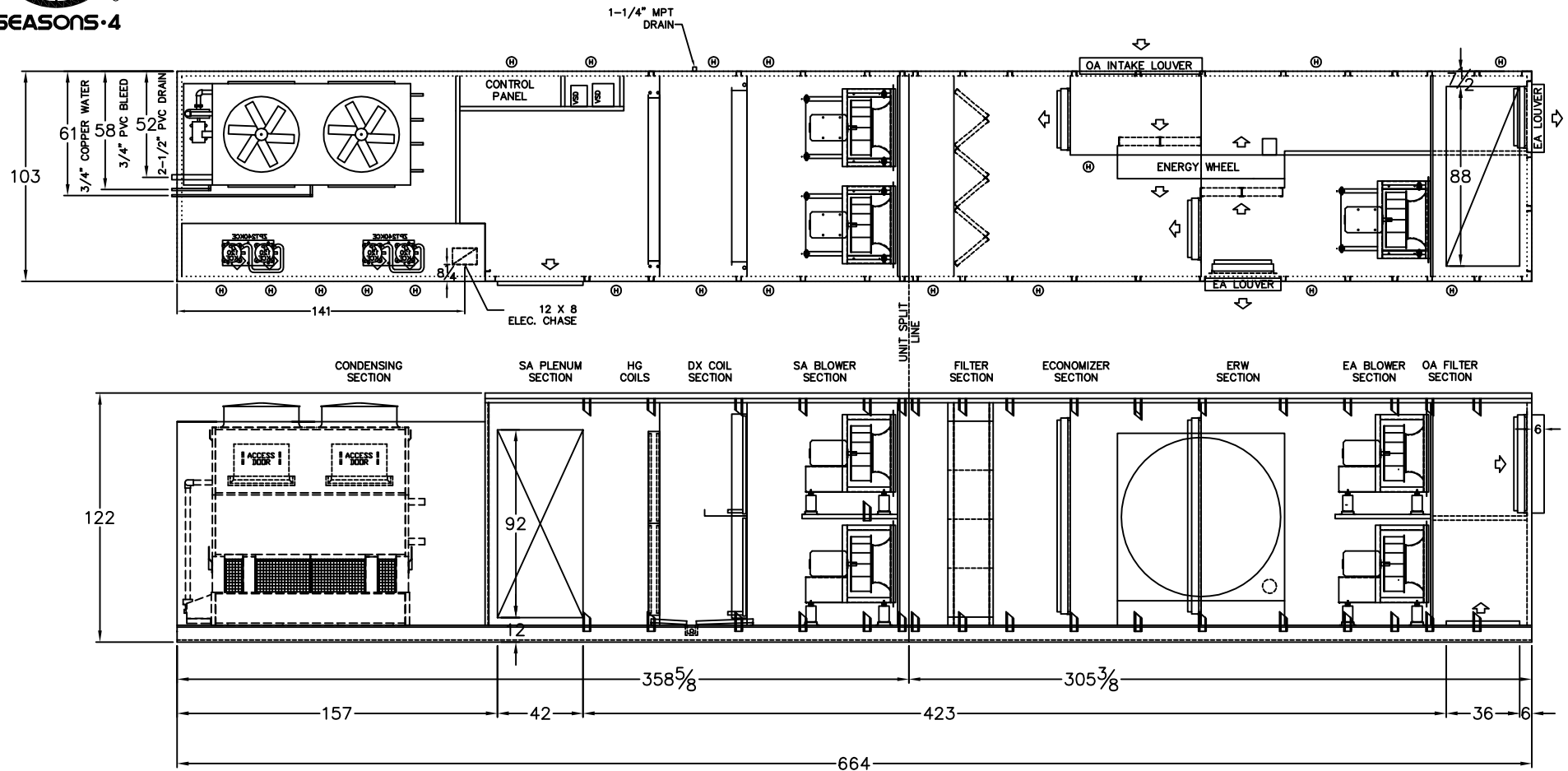
65,000

(SHORT CIRCUIT CURRENT RATING)



SEASONS 4

ENGINEERING AND MANUFACTURING HVAC EQUIPMENT SINCE 1971



LEGEND

- Ⓜ HINGED ACCESS DOOR
- Ⓛ LIFT-OFF ACCESS DOOR
- Ⓟ BALANCING DAMPER

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

REV. #	BY	DATE	DESCRIPTION	DIMENSIONAL DATA	DRAWN BY	MAS
0	MAS	4/07/2017	ORIGINAL ISSUE	BUFFALO NEWS BUFFALO, NY ERU-1 & 2	DATE	6/30/2017
1	JHH	7/26/2017	REVISED UNIT HEIGHT & ADDED BLOWER SPRINGS		SCALE	N/A
2	JHH	8/3/2017	REVISED CONTROL PANEL DESIGN		REVISION #	3
3	DA	10/10/2017	ADDED CONDENSER PIPE STUB LOCATIONS		DWG. NAME	C650D01MS