



Now In Production

JUNE 2009

SUNY @ GENESEO, GENESEO, NY

Four (4) direct replacement units at the State University of New York at Geneseo. A combination of multi-zone with energy recovery systems, single zone heating only and multi-zone with DX cooling.

Representative : R.L. KISTLER, INC. 300 Mile Crossing Blvd, Rochester, NY 14624

Tim Blackburn, Rudy & Andy Weidert ; P 585-436-1940; F 585-436-6606 ; www.rlkistler.com



One of the existing units (AHU-4) is a 30,000 CFM multi-zone unit with a run-around loop energy recovery system with pumps and many water valves. A maintenance system nightmare. The university was looking for a more efficient ERU system with less headaches that would still match the existing curb..



The best alternative was determined to be a plate-type heat exchanger with no pumps, no valves, no water, no moving parts, and the unit efficiency has improved by 25 to 30%. The unit also includes hot water pre-heat and reheat coils.





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The new direct replacement double deck multi-zone unit with 5 zones will match the roof curb, zones, water, and power connections of the existing unit. Twin plenum airfoil supply and return air blowers with premium efficiency motors, VFD'S, and service lights are some of the features provided.



Additional features aluminum exterior panels that will never rust, single door handles with multiple latches, clogged filter switch, and perforated liners in supply and return air sections. The units are completely factory tested and then shipped to the jobsite for rigging



ENGINEERING SPECIFICATIONS

JOB NAME SUNY @ GENESEO
LOCATION GENESEO, NY
DATE PREPARED Revised: 5/28/09
SEASONS-4 REFERENCE # A432-04
UNIT MODEL # 6MRR34-XXXA-HW38.-30SE
UNIT DESIGNATION AHU-4
SYSTEM VOLTAGE 460/3/60

DESIGN DATA

ENERGY RECOVERY COOLING CAPACITY (BTUH):	118,765
ENERGY RECOVERY HEATING CAPACITY (BTUH):	1,119,976
TOTAL AIRFLOW (CFM)	30,000
OUTDOOR AIR (CFM)	30,000
RETURN/EXHAUST AIR (CFM):	21,000
TOTAL HEATING CAPACITY FROM HW COILS (BTUH)	3,786,357

SUPPLY AIR BLOWER SECTION

TYPE	AF SWSI PLENUM
NUMBER/SIZE	2/33"
AIRFLOW (CFM)	30,000
TOTAL STATIC PRESSURE (TSP) IN WC	5.00
EXTERNAL STATIC (ESP) IN WC	1.50
DESIGN FAN SPEED (RPM)	1,212
FAN BHP (INCLUDING DRIVE LOSSES)	2 @ 16.29
MOTOR HP	2 @ 20
MOTOR DRIVE	VARIABLE FREQUENCY DRIVE

EXHAUST AIR BLOWER SECTION

TYPE	AF SWSI PLENUM
NUMBER/SIZE	2/27"
AIRFLOW (CFM)	21,000
TOTAL STATIC PRESSURE (TSP) IN WC	3.35
EXTERNAL STATIC (ESP) IN WC	1.00
DESIGN FAN SPEED (RPM)	1,316
FAN BHP (INCLUDING DRIVE LOSSES)	2 @ 7.77
MOTOR HP	2 @ 10
MOTOR DRIVE	VARIABLE FREQUENCY DRIVE

OA FILTER SECTION

TYPE	2" PLEATED MERV 13
NUMBER/SIZE	24/16x20
TOTAL FACE AREA (SQ-FT)	53.3
FACE VELOCITY (FPM)	563

EA FILTER SECTION

TYPE	2" PLEATED MERV 13
NUMBER/SIZE	18/16x20
TOTAL FACE AREA (SQ-FT)	40.0
FACE VELOCITY (FPM)	525

ENGINEERING SPECIFICATIONS

HOT WATER COIL SECTION (PREHEAT)

FACE AREA (SQ-FT)	49.8
ROWS/FPI	2/7
CAPACITY (BTUH)	1,992,941
ENTERING AIR TEMP (DEG F)	-10.0
LEAVING AIR TEMP (DEG F)	50.9
CONDITIONED AIR (ACFM)	30,000
ENTERING WATER TEMP (DEG F)	200.0
LEAVING WATER TEMP (DEG F)	111.4
FLOWRATE (GPM)	45.0
TYPE FLUID	WATER
FLUID PRESSURE DROP (FT WATER)	2.46
SUPPLY/RETURN CONNECTION SIZE	2 1/8, 2 1/8

HOT WATER COIL SECTION (REHEAT)

FACE AREA (SQ-FT)	34.7
ROWS/FPI	3/8
CAPACITY (BTUH)	1,793,416
ENTERING AIR TEMP (DEG F)	45.0
LEAVING AIR TEMP (DEG F)	99.8
CONDITIONED AIR (ACFM)	30,000
ENTERING WATER TEMP (DEG F)	200.0
LEAVING WATER TEMP (DEG F)	120.3
FLOWRATE (GPM)	45.0
TYPE FLUID	WATER
FLUID PRESSURE DROP (FT WATER)	2.32
SUPPLY/RETURN CONNECTION SIZE	2 1/8, 2 1/8

PLATE TYPE ENERGY RECOVERY HEAT EXCHANGER

SIZE	88" X 66"
SUPPLY AIRFLOW (SCFM)	21,000
SUMMER ENTERING AIR TEMP (FDB/FWB)	88.0/74.0
SUMMER LEAVING AIR TEMP (FDB/FWB)	82.8/72.5
WINTER ENTERING AIR TEMP (FDB/FWB)	.0/.0
WINTER LEAVING AIR TEMP (FDB/FWB)	49.3/33.3
EFFECTIVENESS (%)	20.5 (SUMMER) / 55.6 (WINTER)
PRESSURE DROP (IN-WC)	1.32
BYPASS AIR (CFM)	9,000
MIXED SUMMER LEAVING AIR TEMPERATURE (FDB/FWB)	84.4/73.0
MIXED WINTER LEAVING AIR TEMPERATURE (FDB/FWB)	33.4/23.9

UNIT WEIGHT (LBS)

18,050

ENGINEERING SPECIFICATIONS

ELECTRICAL DATA

JOB NAME SUNY @ GENESEO

LOCATION GENESEO, NY

DATE PREPARED Revised: 5/28/09

SEASONS-4 REF NUMBER A432-04 **UNIT MODEL** 6MRR34-XXXA-HW38.-30SE

UNIT DESIGNATION AHU-4

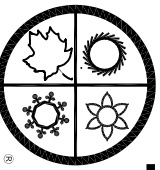
SYSTEM VOLTAGE 460 **CONTROL VOLTAGE** 120 **EXT. VOLTAGE** 24

<u>ITEM</u>	<u>QTY</u>	<u>HP</u>	<u>FLA</u>	<u>LRA</u>	<u>KW</u>	<u>TYPE</u>
SA FAN	2	20.0	23.5	160.8	13.1	Bald
EA FAN	2	10.0	12.5	96.0	6.3	Bald
CONTROL CKT			1.6			
CONVENIENCE OUTLET			3.3			10 Amps
TOTALS (COOL)	4	***	76.9		38.8	
TOTALS (HEAT)	4	60.0	76.9		38.8	

M.C.A. (MINIMUM CIRCUIT AMPACITY)

M.O.P. (MAXIMUM OVERLOAD PROTECTION)

S.C.C.R. (SHORT CIRCUIT CURRENT RATING)

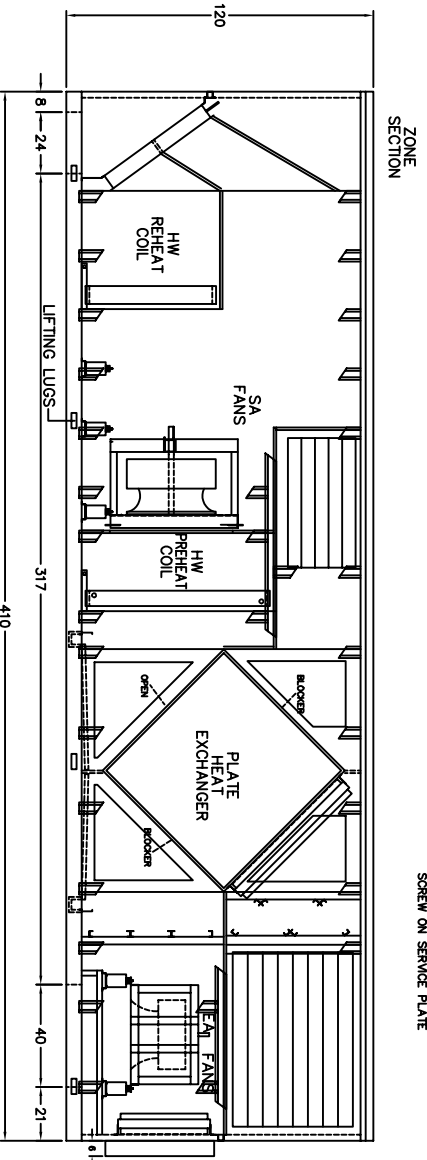
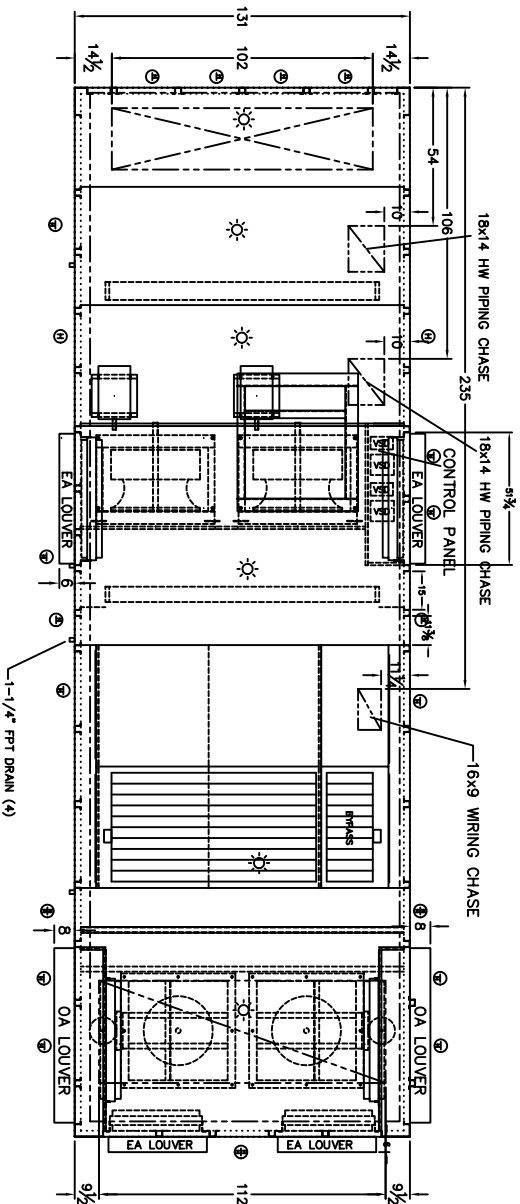


SEASONS 4

ENGINEERING AND MANUFACTURING HVAC EQUIPMENT SINCE 1971

DIMENSIONAL DATA

SUNY © GENESEO
GENESEO, NY
AHU-4



- ☼ MARINE LIGHT
- ⊕ HINGED DOOR
- ⊕ HINGED DOOR TOP & BOTTOM
- Ⓛ LIFT-OFF DOOR

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

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REV. 3 06/15/2009 BP
 REV. 2 05/26/2009 DR
 REV. 1 05/06/2009 BP

04/22/2009 HH/BP

A432D02HH