

TAG	ASSOCIATED EQUIPMENT	CFM	GLOBAL PLASMA SOLUTIONS MODEL #	NOTES
BPO-1	PH-1	570	1234	1. NEEDLE POINT TYPE IONIZER WITH ABS PLASTIC OR POWDER COATED STEEL HOUSING AND CHIMNEY OR STAINLESS STEEL. ON/CONTROL NEEDLES. SEE BI-POLAR IONIZATION DETAIL. 2. PROVIDE LED TO VERIFY IONIZATION. 3. PROVIDE FACTORY FURNISHED 24 VAC INPUT TERMINAL FOR POWERING BI-POLAR UNIT FROM ASSOCIATED EQUIPMENT'S 24V FAN TERMINAL. 4. UNIT SHALL BE DESIGNED FOR MOUNTING INSIDE AIR CONDITIONING EQUIPMENT. 5. PROVIDE MULTIPLE BI-POLAR UNITS OF QUANTITY INDICATED.

TAG	GREENHECK MODEL NUMBER	MINIMUM FREE AREA FT. SQ.	WIDTH INCHES	HEIGHT INCHES	DEPTH INCHES	CFM	MOUNTING HT. FT. BE AFF.	NOTES
L-1	EDJ-401	1.20	30	18	6	400	12'-0"	12.3.4.5.6
L-2	EDJ-401	1.20	30	18	6	375	12'-0"	12.3.4.5.6
L-3	ENC-011	10.71	72	48	6	570	10'-0"	12.3.4.5.6.7

1. ANKA CERTIFIED LOUVER WITH BACK MOUNTED 3/8" MESH BRIDGECOR.
2. SEE SPECIFICATIONS FOR FINISH COLOR SELECTED BY ARCHITECT. BASIS OF BID SHALL BE KYNAR.
3. STATIONARY LOUVER WITH DRAINABLE HEADS AND NON-DRAINABLE BLADES. SEE STATIONARY LOUVER IN METAL PANEL WALL DETAIL.
4. SEAL AND GASKET PERIMETER OF LOUVER WATER TIGHT.
5. SECURE LOUVER TO WALL ON MAXIMUM 2'-0" CENTERS ON FOUR SIDES. PROVIDE 22 GAUGE GALVANIZED SLEEVE THROUGH WALL.
6. PROVIDE OPTIONAL 1 1/2" WIDE FLANGED FRAME AROUND PERIMETER.
7. COMBINATION LOUVER WITH STATIONARY FRONT DRAINABLE BLADES AND AUTORIZED 120VAC ACTUATOR DAMPER. POWERED OPEN/SPRING CLOSED. SEE COMBINATION LOUVER IN METAL PANEL WALL DETAIL.

TAG	PRICE MODEL NUMBER	SIZE OR LENGTH	FINISH	THROW	NOTES
A	100	24 X 6	WHITE	SIDEWALL	1.5.8
B	90	18 X 18	WHITE	SIDEWALL	4.5.8
C	AND	8 X 8	WHITE	4-WAY	2.5.8.7
D	82	14 X 14	WHITE	---	3.8.7
E	90	32 X 48	WHITE	---	4.5.8
F	90	72 X 48	WHITE	---	4.5.8

1. INDUSTRIAL DUTY EXTRUDED ALUMINUM DRUM LOUVER WITH ADJUSTABLE DRUM AND BLADES.
2. LOUVERED FACE HIGH CAPACITY STEEL CEILING SUPPLY DIFFUSER WITH FIXED AIR DISCHARGE PATTERN AS SCHEDULED. PROVIDE OPPOSED BLADE DAMPER.
3. ALL ALUMINUM 1" X 1" X 1" "EGG CRATE" EXHAUST RETURN TRANSFER GRILLE.
4. HEAVY DUTY STEEL SIDEWALL RETURN GRILLE WITH FIXED HORIZONTAL BLADES AT 45° DEFLECTION. PROVIDE 3/4" BLADE SPACING AND WELDED CONSTRUCTION.
5. FLANGED FRAME FOR SURFACE MOUNTING.
6. NC LEVEL NOT TO EXCEED NC 30.
7. SEE CEILING GRILLE DUCT CONNECTION DETAIL.

TAG	GREENHECK MODEL NO.	CFM	FAN STATIC PRESSURE IN W.G.	FAN RPM	MOTOR HP	MAX. SONES	NOTES
EP-1	SP-400	75	0.15	537	1/8HP	0.3	12.3.4
EP-2	SP-400	75	0.15	537	1/8HP	0.3	12.3.4
EP-3	SP-400	75	0.15	537	1/8HP	0.3	12.3.4
EP-4	SP-400	300	0.20	1125	1/2HP	2.8	12.3.4
EP-5	SP-400	300	0.20	1125	1/2HP	2.8	12.3.4

1. CENTRIFUGAL CEILING EXHAUST FAN WITH INTEGRAL GRILLE, FLAPPER BACKDRAFT DAMPER, PLUG AND CORD SET AND MOUNTING BRACKETS.
2. DIRECT DRIVE.
3. PROVIDE INTERNALLY MOUNTED FACTORY INSTALLED SPEED CONTROLLER.
4. PROVIDE FACTORY FURNISHED GRILLE MOUNTED PASSIVE INFRARED MOTION DETECTOR TO START/STOP FAN.

TAG	FRAME MODEL NUMBER	TOTAL COOLING TON	SENSIBLE COOLING TON	TOTAL SUPPLY CFM	O.A. CFM	REVERSE CYCLE HEATING	STRIP HEAT IN @ 40V	APPROX. SUPPLY ESP IN W.G.	SUPPLY MOTOR SHP	COOL STAGES	HEAT STAGES	ENTERING AIR DB	ENTERING AIR WB	MINIMUM AMBIENT COOLING DB	NOTES
PH-1	100-100	175.0	128.4	570	150	85.2	36	0.75	3	2	2	78	66	48	12.3.4.5.6.7.8.9.10.11.12.13.14

1. COOLING CAPACITIES BASED ON AIR ENTERING EVAPORATOR AT SCHEDULED CONDITION AND 100°F AMBIENT AIR TEMPERATURE. UNIT SHALL PROVIDE MECHANICAL COOLING DOWN TO SCHEDULED TEMPERATURE. UNIT SHALL BE R-410A REFRIGERANT.
2. HEATING CAPACITIES BASED ON 70°F AIR ENTERING EVAPORATOR AT 100°F AMBIENT WITH DEFROST ALLOWANCE. STRIP HEAT KW LISTED IS AT CONNECTED VOLTAGE.
3. PROVIDE TRIMMED CONDENSATE DRAIN. SEE CONDENSATE DRAIN TRAP DETAIL.
4. PROVIDE FORWARD CURVED BELT DRIVES INDOOR FAN WITH ADJUSTABLE SHEAVE. ALL BELT DRIVES FANS SHALL HAVE ADJUSTING BELT TENSIONERS (IF AN AVAILABLE OPTION).
5. STATIC PRESSURE SCHEDULED DOES NOT INCLUDE WET COOLING COIL, FILTER, STRIP HEATER OR SYSTEM EFFECT LOSSES.
6. PROVIDE FACTORY INSTALLED NON-FUSED DISCONNECT SWITCH.
7. PROVIDE HINGED ACCESS DOORS WITH 1/4 TURN LATCHES.
8. PROVIDE FACTORY INSTALLED POWERED G.F.I. CONVENIENCE OUTLET.
9. PROVIDE LOUVERED CONDENSER COIL HAS. GUARDS.
10. RTAC SHALL BE MOUNTED ATOP 14" TALL (NON-MINI) CURB, MOUNTED ATOP CONCRETE PAD.
11. PROVIDE ELECTROMECHANICAL CONTROLLER.
12. OUTDOOR AIR CFM FOR THIS UNIT AND AREA HAS BEEN DETERMINED BASED ON ASHRAE 62.1 INDOOR AIR QUALITY REQUIREMENT RATHER THAN THE PRESCRIPTIVE VENTILATION RATE PROCEDURE. THE OUTDOOR AIR RATES USING THIS PROCEDURE ARE LOWER THAN THE PRESCRIPTIVE PROCEDURE. THIS UNIT SHALL BE PROVIDED WITH A CONTRACTOR INSTALLED NEEDLE POINT BI-POLAR IONIZATION UNIT TO REDUCE CONTAMINANT LEVELS TO THOSE EQUAL TO OR LOWER THAN THE VENTILATION RATE PROCEDURE. SEE BI-POLAR IONIZATION CONTROL DETAIL.
13. UNIT SHALL HAVE HORIZONTAL DISCHARGE AND HORIZONTAL RETURN WITH CONNECTIONS MADE TO BE COMPATIBLE WITH BUILDING GEOMETRY AND CHASE. STACKED SUPPLY AND RETURN WILL NOT BE ALLOWED. UNIT SHALL BE MOUNTED ATOP FULL PERIMETER CURB.
14. PROVIDE DRY BULB TYPE OUTDOOR AIR ECONOMIZER HOOD WITH MINIMUM FREE AIR POSITION TO AVOID LEAKAGE ECONOMIZER. INTAKE HOOD ECONOMIZER SHALL BE DESIGNED FOR UP TO 100% OF SUPPLY CFM. PROVIDE INTEGRATED ECONOMIZER CONTROLS TO ALLOW SIMULTANEOUS ECONOMIZER/COMPRESSOR OPERATION.

LEGEND

GRILLE REGISTER DIFFUSER DESIGNATION ABOVE WITH CFM SHOWN BELOW FOR TAB AGENT TO BALANCE DEVICE AT
DUCT SIZE FIRST DIMENSION IS SIDE DRAWN
RIGID ROUND DUCTWORK
FLEXIBLE ROUND DUCTWORK
RECTANGULAR - TO ROUND DUCT TRANSITION
FLEXIBLE CONNECTION
ACQUATHERMAL DUCT LINER - 1/2" THICK OR 1" THICK, RESPECTIVELY
SQUARE ELBOW WITH TURNING VANES
45° BRANCH ENTRY FITTING
BELLMOUTH TAKE-OFF COLLAR AT RUN-OUT WITH ANCHORING DAMPER. SEE BELLMOUTH AND 45° FITTING TAKEOFF DETAIL.
45° FITTING TAKEOFF WITH ANCHORING DAMPER. SEE BELLMOUTH AND 45° FITTING TAKEOFF DETAIL.
SUPPLY DUCT TO OR FROM ABOVE
RETURN OR EXHAUST DUCT TO OR FROM ABOVE
DUCT OR PIPE OFFSET: ANKON HEAD INDICATES DIRECTION OF RISE
RETURN OR EXHAUST AIR FLOW
WALL MOUNTED THERMOSTAT
CONDENSATE DRAIN PIPING
DR. WB
DRY BALL, WET BALL
SS
STAINLESS STEEL
FPM
FEET PER MINUTE
CFM.F
CUBIC FEET PER MINUTE
GA
OUTDOOR AIR
MBH
BTU/Hr @ 1000
APPROX.
ESP IN W.G.
EXTERNAL STATIC PRESSURE LOSS WATER GAIN
HP
HORSEPOWER
RPM
REVOLUTIONS PER MINUTE
UNLESS NOTED OTHERWISE
UNLESS FINISHED
UNLESS NOTED OTHERWISE
KW
KILOWATTS
AT
TEMPERATURE DIFFERENCE
B.E. T.E.
BOTTOM ELEVATION, TOP ELEVATION
SECTION OR DETAIL IDENTIFICATION NUMBER
SHEET NUMBER ON WHICH SECTION OR DETAIL IS DRAWN

GENERAL NOTES

- SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR EXACT BUILDING ARRANGEMENT, DIMENSIONS AND DETAILS. THESE DRAWINGS ARE DIAGNOSTIC AND ARE NOT TO BE SCALED.
- COORDINATE DUCT ROUTING AND EQUIPMENT LOCATION WITH PLUMBING AND ELECTRICAL INSTALLATIONS AND WITH BUILDING STRUCTURAL MEMBERS. OFF-SET DUCTS/PIPING AND SHFT EQUIPMENT AS REQUIRED TO AVOID CONFLICTS WITH OTHER INSTALLATIONS.
- COORDINATE LOCATION OF CEILING REGISTERS WITH LIGHTING LAYOUT AND CEILING GRID SYSTEMS AND APPURTENANCES. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION.
- DUCT SIZES INDICATED ON THE PLANS ARE CLEAR INSIDE DIMENSIONS REQUIRED. WHERE LINER IS INDICATED, INCREASE DUCT SIZE.
- REFER TO THE ELECTRICAL DRAWINGS FOR VOLTAGE, PHASE, MAXIMUM ALLOWABLE CURRENT DRAIN, AMPERAGE AND CONNECTION ARRANGEMENT (SINGLE OR MULTI-POINT CONNECTION, ETC.) OF ALL MECHANICAL EQUIPMENT PRIOR TO OBSERVING INSTALLING EQUIPMENT.
- SUPPORT ALL DUCTS, PIPING AND EQUIPMENT FROM PRIMARY BUILDING STRUCTURAL MEMBERS AND PROVIDE SUPPLEMENTAL STRUCTURAL FRAMING AS REQUIRED BETWEEN PRIMARY BUILDING STRUCTURAL MEMBERS TO SUPPORT ALL SYSTEMS INSIDE THE BUILDING.

TAG	CHAMK MODEL NUMBER	CFM	B.E. AFF. MOUNTING HEIGHT	HEATING OUTPUT KW	NOTES
EHW-1	CHW-101	85	9'-0"	0.5	12.3
EHW-2	CHW-101	85	9'-0"	0.5	12.3
EHW-3	CHW-101	85	9'-0"	0.5	12.3
EHW-4	CHW-101	85	9'-0"	0.5	12.3

1. WALL MOUNTED FAN FORCED ELECTRIC HEATER WITH PAINTED STEEL LOUVERED COVER.
2. UNIT TO BE RECESS MOUNTED IN WALL.
3. PROVIDE INTEGRAL DAMPER PROOF THERMOSTAT, DISCONNECT AND HIGH TEMPERATURE LIMIT OUT-OFF.

FILTER TYPE	CHAMK FILTER MODEL NUMBER	APPLICATION	MAXIMUM PRESSURE DROP @ 1000 FPM	ASHRAE 52.1-1992 EFFICIENCY	ASHRAE 52.2-1998 EFFICIENCY	FILTER THICKNESS	NOTES
PLEATED	30-30	PH	0.28	90%	30%	7"	12.3.4

1. A. CLASS 2, MEDIUM EFFICIENCY, COTTON AND SYNTHETIC MEDIA FILTER.
2. PROVIDE RIGID HEAVY DUTY FRAME BONDED TO MEDIA WITH WELDED WIRE PLEATED SUPPORT GRID TO MAINTAIN RIGID PLEAT.
3. FILTER MINIMUM EFFICIENCY REPORTING VALVE (MERV) RATING BASED ON EVALUATION IN ACCORDANCE WITH ASHRAE STANDARD 52.2-1998.
4. FILTER SIZE AND FILTER QUANTITIES FOR EACH PIECE OF EQUIPMENT SHALL BE DETERMINED BY EQUIPMENT MANUFACTURER.

TAG	CHAMK MODEL NUMBER	KW	BTU/Hr OUTPUT	CFM	NOTES
ECW-1	CDP-548	2	6,800	285	12.3.4.5
ECW-2	CDP-548	2	6,800	285	12.3.4.5

1. COMMERCIAL DOWN FLOW FAN FORCED CEILING MOUNTED ELECTRIC HEATER.
2. PROVIDE FAN DELAY SWITCH AND HIGH TEMPERATURE CUT-OFF.
3. PROVIDE SURFACE MOUNTING FRAME FOR MOUNTING BELOW CEILING.
4. PROVIDE POWER DISCONNECT SWITCH (OPTION SPD).
5. PROVIDE INTEGRAL THERMOSTAT.

TAG	LO MODEL NUMBER	TOTAL COOLING TON	TOTAL SENSIBLE TON	O.A. CFM	INTERNAL HEATING CAP. MBH	REVERSE HEAT KW @ 200°F	TOTAL SUPPLY CFM	NOTES
PTHP-1	LP12H25A	11.8	8.7	0	10.0	1.1	390	12.3.4.5.6.7.8.9

1. PACKAGED TERMINAL HEAT PUMP UNIT COMPLETE WITH INSULATED WALL SLEEVE.
2. PROVIDE EXTRUDED ANODIZED ALUMINUM EXTERIOR ARCHITECTURAL LOUVERED WALL GRILLE. PROVIDE BAKED ENAMEL FINISH WITH COLOR SELECTED BY ARCHITECT.
3. MANUFACTURER SHALL PROVIDE RECEPTACLE AND PLUG AND CORD SET IN SUB-BASE.
4. CONDENSATE REMOVAL ACCOMPLISHED BY SPRAYING CONDENSATE ON CONDENSER COIL AND TO OUTSIDE. UNIT SHALL NOT REQUIRE CONDENSATE DRAIN CONNECTION.
5. PROVIDE AUXILIARY ELECTRIC STRIP HEATER OF CAPACITY INDICATED.
6. COOLING CAPACITY BASED ON AIR ENTERING EVAPORATOR AT 70°F DB, 67°F WB, AND 80°F AMBIENT AIR TEMPERATURE.
7. HEATING CAPACITY BASED ON REVERSE CYCLE HEAT PUMP OPERATION AND 47°F AMBIENT AIR TEMPERATURE.
8. SEE PACKAGED TERMINAL HEAT PUMP DETAIL.
9. PROVIDE FACTORY FURNISHED WIRED WALL MOUNTED THERMOSTAT FOR FULL CONTROL.

ISSUANCES

DATE	DESCRIPTION
03.23.2017	Bldg

KEYPLAN

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PROJECT:
Whitewater High School
Multi-purpose Building

CLIENT:
Fayette County Schools

SHEET TITLE:
MECHANICAL
LEGEND,
SCHEDULES &
GENERAL NOTES

FACILITY CODE:
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