

PACKAGED ROOFTOP UNIT SCHEDULE - DX COOLING/ELECTRIC HEAT																											
TAG	SUPPLY FAN DATA						DX COIL DATA						ELECTRIC HEATING COIL DATA						DIMENSIONAL DATA				BASIS OF DESIGN			REMARKS	
	SUPPLY AIR (CFM)	OUTSIDE AIR (CFM)	ESP (IN WG)	HP	FAN DRIVE	ELECTRICAL VOLTS PHASE	TOTAL CAPACITY (MBH)	SENS CAPACITY (MBH)	EDB (°F)	EWB (°F)	LDB (°F)	LWB (°F)	TONS	TOTAL CAPACITY (MBH)	EDB (°F)	LDB (°F)	ELEC HEAT (KW)	MCA	MOCp	UNIT HEIGHT (IN)	UNIT WIDTH (IN)	UNIT LENGTH (IN)	UNIT WEIGHT (LBS)	MANUFACTURER	MODEL NO		
RTU-QA-1	1,100	140	1.0	2.4	BELT	460S 3	32.9	24.1	78.6	64.5	56.1	53.6	3	39.2	57.5	90.5	11.5	23.2	25	33	49	74	568	JCI	Z0E042AC1AA1B322A3	SEE NOTES	
NOTES:																											
1. UNIT PROVIDED BY GENERAL CONTRACTOR, INSTALLED BY MECHANICAL CONTRACTOR.																											
2. SUMMER DESIGN CONDITIONS: 93°F DRY BULB/73°F WET BULB. WINTER DESIGN CONDITIONS: 6°F DRY BULB.																											
3. PROVIDE UNIT WITH DRY-BULB ECONOMIZER WITH BAROMETRIC RELIEF AND HOODS WITH ECONOMIZER FAULT DETECTION AND DIAGNOSTIC. PROVIDE UNIT WITH RAIN HOOD AND WATER ELIMINATOR/FILTERS ON OUTDOOR AIR INTAKE. PROVIDE RAIN HOOD ON BAROMETRIC RELIEF OUTLET.																											
4. PROVIDE UNIT WITH 2 PLATED MERV-8 FILTERS AND SPARE FILTERS. UNIT SHALL BE EQUIPPED WITH A DIRTY FILTER SWITCH.																											
5. PROVIDE UNIT WITH POWERED CONVENIENCE OUTLET (120-VOLT/115-AMP) AND HACR CIRCUIT BREAKER/DISCONNECT.																											
6. PROVIDE UNIT WITH SAFETY MONITORING FOR HIGH- AND LOW-PRESSURE SWITCHES, FREEZE/STATS AND TEMPERATURE LIMIT SWITCH FOR ELECTRIC HEAT.																											
7. PROVIDE UNIT WITH SMART EQUIPMENT CONTROLLER INCLUDING DISCHARGE AIR, RETURN AIR AND OUTDOOR AIR TEMPERATURE SENSORS.																											
8. PROVIDE UNIT WITH ONE (1) YEAR LIMITED WARRANTY ON THE COMPLETE UNIT AND FIVE (5) YEAR WARRANTY ON COMPRESSORS AND ELECTRIC HEATER ELEMENTS.																											
9. UNIT IS RATED AT 14.70 SEER/12.20 EER AND IS PROVIDED WITH R-410A REFRIGERANT.																											
10. PROVIDE UNIT WITH PROGRAMMABLE THERMOSTAT FOR 24/7 OPERATION AND AUTOMATIC SWITCHOVER CAPABILITIES.																											
11. PROVIDE UNIT WITH MANUFACTURER'S ROOF CURB.																											
SEQUENCE OF OPERATION:																											
THE UNIT SHALL BE LOCALLY CONTROLLED AND OPERATE IN CONSTANT VOLUME MODE FOR SUPPLY AND RETURN AIR.																											
COOLING MODE: UPON A RISE IN SPACE TEMPERATURE ABOVE 75°F (ADJ.), THE COMPRESSOR SHALL ENERGIZE TO MAINTAIN A SPACE TEMPERATURE OF 75°F (ADJ.). UPON A FALL IN SPACE TEMPERATURE BELOW THE COOLING SETPOINT, THE COMPRESSOR SHALL DE-ENERGIZE.																											
HEATING MODE: UPON A FALL IN SPACE TEMPERATURE BELOW 70°F (ADJ.), THE ELECTRIC HEATING ELEMENT SHALL ENERGIZE TO MAINTAIN A SPACE TEMPERATURE OF 70°F (ADJ.). UPON A RISE IN SPACE TEMPERATURE ABOVE THE HEATING SETPOINT, THE HEATING ELEMENT SHALL DE-ENERGIZE.																											
ECONOMIZER MODE: THE ECONOMIZER MODE SHALL BE INITIATED WHEN THE OUTDOOR AIR-DRY-BULB TEMPERATURE RANGE IS BETWEEN 50°F AND 58°F (ADJ.). CHANGEOVER FROM COMPRESSOR TO ECONOMIZER OPERATION SHALL BE PROVIDED BY AN INTEGRAL ELECTRONIC ENTHALPY CONTROL.																											
FUME HOOD CLOSED/MOTORIZED DAMPER FOR FUME HOOD OPERATION: WHILE THE FUME HOOD IS CLOSED AND IN THE FUME HOOD EXHAUST FAN IS DE-ENERGIZED, MD-1 SHALL BE CLOSED AND MD-2 SHALL BE OPEN TO PROVIDE SUPPLY AIR TO THE ADJACENT SPACE OF THE QA LAB.																											
FUME HOOD OPEN/MOTORIZED DAMPER FOR FUME HOOD OPERATION: WHILE THE FUME HOOD IS OPEN (18" MAX PER FLNA STANDARDS) AND THE FUME HOOD EXHAUST FAN IS ENERGIZED, MD-1 SHALL BE OPEN TO SUPPLY MAKE-UP AIR TO THE QA LAB AND MD-2 SHALL BE CLOSED.																											

FUME HOOD EXHAUST FAN SCHEDULE (BY OTHERS-INFO ONLY)											
TAG	LOCATION	FAN TYPE	CFM	ESP (IN/WT)	DRIVE	HP	VOLTS	PHASE	BASIS OF DESIGN		REMARKS
									MANUFACTURER	MODEL NO	
EF-04-1	ROOF	UTILITY SET	450 / 725	0.68	BELT	3/4	120	1	LASBCONO	82006-752	SEE NOTES
NOTES:											
1. FUME HOOD EXHAUST FAN SHALL BE PROVIDED WITH THE FUME HOOD. 2. PER FLMA STANDARDS, THE MAXIMUM SASH HEIGHT OF OPERATION SHALL BE 18". EQUATING TO 450 CFM AT 100 FPM FOR THE 4' FUME HOOD. 3. EXHAUST FAN SHALL BE COATED STEEL BLOWER WITH INHERENTLY NON-FLAMMABLE HOUSING HAVING A PHENOLIC COATING. 4. EXHAUST FAN SHALL HAVE ADJUSTABLE SHEAVES FOR PERFORMANCE ADJUSTMENTS AND A POWDER-COATED BASE AND WEATHER COVER. 5. PROVIDE A POWDER-COATED STEEL BLOWER TRANSITION ADAPTER (30186-002) AND ZERO PRESSURE WEATHERCAEP (30185-000) WITH FAN/BLOWER.											
<u>SEQUENCE OF OPERATION:</u>											
THE BLOWER SHALL OPERATE BASED ON THE HOOD POSITION OF OPEN (18" SASH OPENING) OR CLOSED (SASH FULLY CLOSED).											
THE FUME HOOD SHALL SEND A SIGNAL TO THE BLOWER TO ENERGIZE UPON OPENING THE SASH AND DE-ENERGIZE UPON CLOSING THE SASH.											

GRILLE, REGISTER & DIFFUSER SCHEDULE								
TAG	TYPE	SERVICE	CFM RANGE	NECK SIZE (IN)	MAX PD	MANUFACTURER/ MODEL NO	DESCRIPTION	REMARKS
S1	CEILING	SUPPLY	225	8	0.1	PRICE / SCD	SQUARE COE DIFFUSER WITH 360-DEGREE AIR PATTERN	SEE NOTES
S2	CEILING	SUPPLY	250 - 400	10	0.1	PRICE / SCD	SQUARE COE DIFFUSER WITH 360-DEGREE AIR PATTERN	SEE NOTES
S3	SIDEWALL	SUPPLY	400	10 X 10	0.1	PRICE / 6102	SIDEWALL SUPPLY GRILLE@-DEGREE/3"4" BLADE SPACING	SEE NOTES
R1	CEILING	RETURN	200	10	0.1	PRICE / 6102	SIDEWALL RETURN GRILLE@-DEGREE/3"4" BLADE SPACING	SEE NOTES
R2	CEILING	RETURN	450	12	0.1	PRICE / 6102	SIDEWALL RETURN GRILLE@-DEGREE/3"4" BLADE SPACING	SEE NOTES
R3	SIDEWALL	RETURN	310	10 X 10	0.1	PRICE / 6102	SIDEWALL RETURN GRILLE@-DEGREE/3"4" BLADE SPACING	SEE NOTES
NOTES:								
1. PROVIDE ALUMINUM GRILLES AND DIFFUSERS WITH BAKED ENAMEL COATING.								
2. SIDEWALL GRILLES (SUPPLY AND RETURN) ARE DUCT-MOUNTED ONLY. GRILLES ARE NOT MOUNTED IN A WALL FACE.								
3. CEILING SUPPLY GRILLES (SCD) SHALL HAVE INSULATION OVER COVER.								

WATER HEATER SCHEDULE							
TAG	LOCATION	PRESET WATER TEMP (°F)	VOLTS / PHASE	HEATING ELEMENT KW	MANUFACTURER	MODEL	REMARKS
IWH	BELOW COUNTER	120	480 / 3	24	CHRONOMITE	ER-SOL	SEE NOTES
NOTES:							
1. MOUNT WATER HEATER UNDER COUNTER							
2. WATER HEATER TO HAVE A DEDICATED ANGLE VALVE.							
3. WATER HEATER SHALL BE HARD WIRED WITH CUTOFF SWITCH OR DISCONNECT.							
4. PROVIDE WATER HAMMER ARRESTOR							
5. PROVIDE LEONARD MODEL 170-LF MIXING VALVE, OR APPROVED EQUIV. TO PROVIDE TEPID WATER FOR EMERGENCY EYE WASH.							

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