

ROOF-MOUNTED GRAVITY VENTILATOR SCHEDULE

MARK		GRV-1	
APPLICATION	---	INTAKE	
AIRFLOW (MAX)	CFM	500	
THROAT DIMENSIONS	IN.	12 x 12	
HEIGHT (EXCL. CURB)	IN.	14	
PRESSURE DROP	IN. WG	0.03	
MANUFACTURER	---	GREENHECK	
MODEL	---	FGI	
NOA #	---	23-1122.03	
NOTES	1. SPUN ALUMINUM GRAVITY HOOD WITH 1/2" METAL MESH BIRDSCREEN. 2. NOA RATED FOR FBC WIND-LOAD REQUIREMENTS. 3. 12" HIGH INSULATED ROOF CURB.		
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AIR-COOLED CHILLER SCHEDULE

MARK		CH-1	
TYPE		SCROLL-HERMETIC	
LOCATION		GROUND	
MANUFACTURER		QUANTTECH	
MODEL NUMBER		QTC3060THJ46XFB	
CAPACITY (NOMINAL/ACTUAL)	TON	60 / 54.29	
AMBIENT TEMP	DEG F	95	
REFRIGERANT CIRCUITS		2	
MINIMUM EER @ DESIGN CONDITIONS	EER	9.65	
MINIMUM IPLV @ DESIGN CONDITIONS	EER	16.02	
COOLER			
WATER FLOWRATE (DESIGN/MINIMUM)	GPM	90.3 / 60.0	
ETHYLENE GLYCOL QUANTITY	%	10	
EWI	"F	50	
LWT	"F	36	
FOULING FACTOR	"F SF/BTUH	0.0001	
MAX PRESSURE DROP	FT WC	10.7	
NO. OF COMPRESSORS		5	
CONDENSER			
NO. OF FANS		4	
ELECTRICAL DATA			
ELECTRICAL	V/PH/Hz	460/3/60	
MCA	A	158	
MOCP	A	175	
SCCR	KA	65	
CONNECTION TYPE		STARTER / DISCONNECT	
CONNECTION QUANTITY		SINGLE POINT	
POWER TYPE		EMERGENCY	
UNIT INFORMATION			
MAX SOUND PRESSURE PER ARI 370 *	dB LWA	93	
	dB @ 63HZ	96	
	dB @ 125HZ	95	
	dB @ 250HZ	91	
	dB @ 500HZ	91	
	dB @ 1KHZ	87	
	dB @ 2KHZ	84	
	dB @ 4KHZ	80	
	dB @ 8KHZ	77	
UNIT DIMENSIONS LxWxH	IN.	101 x 88 x 94	
UNIT WEIGHT (OPERATING)	LB.	5591	
AREA SERVED		ASC: RTU-1, RTU-2, & STERILIZERS	
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SCHEDULE NOTES:

- AIR-COOLED SCROLL TYPE COMPRESSOR WITH VARIABLE SPEED CONDENSER FANS.
 - SP CIRCUIT BREAKER WITH LOCKABLE DISCONNECT AND ACROSS THE LINE STARTER PROVIDED BY MANUFACTURER.
 - PHASE LOSS PROTECTION.
 - PROVIDE MICROPROCESSOR BASED CONTROL WITH BACNET INTERFACE TO BE FULLY INTEGRATED WITH NEW BAS.
 - ACOUSTIC SOUND BLANKET AND ULTRA QUIET FANS WITH VSD.
 - PROVIDE START-UP BY FACTORY PERSONNEL.
 - PROVIDE CURRENT FAULT PROTECTION TO WITHSTAND 15KA IN CONFORMANCE WITH ELECTRICAL FAULT STUDY.
 - PROVIDE WITH DUAL PUMP PACKAGE (PRIMARY/STANDBY PUMPS); 65 FT HEAD (EXTERNAL) WITH VFD POWERED THROUGH CHILLER STARTER. 150 PSI WORKING PRESSURE. PUMP DISCHARGE CHECK VALVES. GAGE TAPPINGS AT SUCTION AND DISCHARGE DRAIN PORTS.
 - FACTORY INSTALLED EXPANSION TANK UNDERNEATH CHILLER.
 - REFER TO SPECIFICATIONS AND DETAILS FOR ACCESSORIES AND PIPING CONNECTIONS.
 - ACCESSORIES INCLUDE DOUBLE THICK INSULATION, POST-COATED DIPPED COILS (ENVIRONMENT GUARD PREMIUM), SERVICE ISOLATION VALVES, LOW/HIGH AMBIENT KIT WITH SUNSHIELD, TO PERMIT CHILLER OPERATION DOWN TO 0 °F, WIRED/OVEREED ENCL PANELS, HOT GAS BYPASS (1 CIRCUIT), PUMP KIT S, SC-EQUIP BOARD, ELECTRONIC EXPANSION VALVES, NEOPRENE ISOLATORS, & 1.5" EVAPORATOR INSULATION.
 - VICTAULIC FLANGES PROVIDED WITH CHILLER AND INSTALLED BY MECHANICAL CONTRACTOR.
 - ONE YEAR PARTS, LABOR, AND REFRIGERANT WARRANTY. FIVE YEAR COMPRESSOR PARTS AND LABOR WARRANTY.
 - R454B REFRIGERANT.
 - NEMA 3R DISCONNECT SWITCH BY DIVISION 26. DISCONNECT SWITCH SHALL NOT BE INSTALLED MORE THAN 6'-7" ABOVE GRADE (AS MEASURED TO THE TOP OF THE DISCONNECT).
- * PER ARI 370 AT 30'

ROOFTOP UNIT SCHEDULE

MARK		RTU-1	RTU-2
AREA SERVED		O.R.'s	PACU/ADMIN
LOCATION		ROOF	ROOF
MANUFACTURER		TEMTROL	TEMTROL
MODEL NUMBER		1TF	1TF
PRE-FILTER TYPE 1		2" MERV-8	2" MERV-8
PRE-FILTER TYPE 2		NONE	NONE
FINAL FILTER		12" MERV-16	4" MERV-14
SUPPLY FAN			
SUPPLY AIRFLOW	CFM	7,600	5,200
OUTSIDE AIRFLOW	CFM	1,425	1,125
SUPPLY FAN QUANTITY		2	2
STATIC PRESSURE (EXTERNAL/TOTAL)	IN. H2O	1.84 / 5.20	1.86 / 4.75
SUPPLY FAN MOTOR POWER (EACH/TOTAL)	HP	6 / 12	3.5 / 7
SUPPLY FAN SPEED	RPM	3394	3378
SUPPLY FAN ELECTRICAL	V/PH/Hz	460/3/60	460/3/60
SUPPLY PLENUM	---	YES	YES
RETURN FAN			
RETURN AIRFLOW	CFM	6,175	4,075
RETURN FAN QUANTITY	---	2	2
STATIC PRESSURE (EXTERNAL/TOTAL)	IN. H2O	0.52 / 0.55	0.57 / 0.60
RETURN FAN MOTOR POWER (EACH/TOTAL)	HP	1 / 2	1 / 2
RETURN FAN SPEED	RPM	1717	1850
RETURN FAN ELECTRICAL	V/PH/Hz	460/3/60	460/3/60
ECONOMIZER AND RELIEF AIR SECTION	---	NONE	NONE
CHILLED WATER COOLING COIL			
TOTAL CAPACITY	BTUH	363,800	226,300
SENSIBLE CAPACITY	BTUH	249,500	152,900
COOLING COIL	ROWS/FPI	8 / 10	4 / 9
MAX. FACE VELOCITY	FPM	465	452
MAX. AIR PRESSURE DROP	IN. H2O	1.02	0.44
COIL ENTERING AIR TEMP.	"F/F	72.5 / 61.1	80.1 / 67.0
COIL LEAVING AIR TEMP.	"F/F	42.4 / 42.4	52.7 / 52.1
CHILLED WATER FLOW	GPM	54.0	33.6
WATER TEMP. ENT./LVG.	"F/F	36 / 50	36 / 50
MAX. WATER PRESSURE DROP	FT. H2O	13.8	8.26
COIL...	---	LEFT	RIGHT
SUPPLY/RETURN CONNECTIONS	QTY. / SIZE	1 / 2.5"	1 / 1.5"
CHILLED WAT...	---	3-WAY	2-WAY
ELECTRICAL DATA			
ELECTRICAL	V/PH/Hz	460/3/60	460/3/60
CIRCUIT #1 MCA (SUPPLY FANS / LIGHTS)	AMPS	23	16
CIRCUIT #1 MOCP (SUPPLY FANS LIGHTS)	AMPS	35	20
CIRCUIT #2 MCA (RETURN FANS)	AMPS	6	6
CIRCUIT #2 MOCP (RETURN FANS)	AMPS	15	15
CONNECTION TYPE		VFD / DISC.	VFD / DISC.
CONNECTION QUANTITY		2	2
MINIMUM SCCR	kA	5	5
POWER TYPE		EMERGENCY	EMERGENCY
DIMENSIONS & WEIGHT DATA			
UNIT DIMENSIONS LxWxH (INCL. BASE RAIL)	IN.	221 x 72 x 61	203 x 66 x 57
TOTAL UNIT WEIGHT (EXCLUDING CURB)	LBS.	7,445	6,258
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SCHEDULE NOTES:

- MODULAR ROOF MOUNTED UNIT WITH 6" BASE RAIL SUITABLE FOR OUTDOOR INSTALLATION.
- SOLID INTERIOR LINER, DOUBLE WALL CONSTRUCTION THROUGHOUT. 3" R-24 INSULATION.
- OUTSIDE AIR INTAKE HOOD WITH WASHABLE FILTER, C050 MODULATING ALUMINUM DAMPER AND TRANSDUCER. ACTUATOR AND CONTROLS BY CONTROLS CONTRACTOR.
- SUPPLY AND RETURN PLENUM WITH BOTTOM DISCHARGE AND INTAKE.
- SUPPLY PLENUM AND FRONT LOADING FINAL FILTERS DOWNSTREAM OF COOLING COIL.
- PRE/FINAL FILTERS (AS SHOWN IN SCHEDULE) WITH UNIT MOUNTED MAGNEHELIC GAUGE AND OUTPUT TO BAS.
- CHILLED WATER COOLING COIL SECTION WITH STAINLESS STEEL DRAIN PAN AND CASING.
- FLOAT SWITCH WITH ALARM TO BAS FOR CONDENSATE OVERFLOW.
- ACCESS DOORS IN EACH SECTION. FACTORY INSTALLED PRESSURE SENSOR PORTS ON THE ACCESS DOORS.
- RIGID MOUNT SUPPLY FAN AND MOTOR SECTION (BALANCED TO BV-5). FACTORY MOUNTED VFD WITH MANUAL BYPASS IN NEMA 3R ENCLOSURE (ONE VFD FOR SUPPLY FAN SECTION). FAN SELECTION WILL INCLUDE FULLY LOADED FILTERS. SUPPLY AIR FLOW MONITORING (ON EACH FAN) WITH MAGNESENSE FLOW SENSOR (4-20mA SIGNAL TO BE CONVERTED TO BACNET BY CONTROLS CONTRACTOR).
- RIGID MOUNT RETURN FAN AND MOTOR SECTION (BALANCED TO BV-5). FACTORY MOUNTED VFD WITH MANUAL BYPASS IN NEMA 3R ENCLOSURE (ONE VFD FOR RETURN FAN SECTION). RETURN AIR FLOW MONITORING (ON EACH FAN) WITH MAGNESENSE FLOW SENSOR (4-20mA SIGNAL TO BE CONVERTED TO BACNET BY CONTROLS CONTRACTOR).
- MINIMUM 16" INSULATED ROOF CURB SUCH THAT OUTSIDE AIR INTAKE IS MINIMUM 36" ABOVE FINISHED ROOF. MANUFACTURER TO PROVIDE TIE-DOWN DETAILS IN COMPLIANCE WITH FBC WINDLOAD REQUIREMENTS. INSULATION SHALL EXTEND UNDERNEATH ENTIRE ROOF CURB.
- UNIT MOUNTED CONTROLS WITH BACNET INTERFACE TO BAS.
- 115V FACTORY WIRED CONVENIENCE OUTLET AND INTERNAL LED LIGHTS FOR MAINTENANCE. BOTH ITEMS SHALL BE WIRED TO CIRCUIT #1 (ALONG WITH THE SUPPLY FANS).
- CHILLED WATER SYSTEM SHALL BE CHARGED WITH 10% ETHYLENE GLYCOL. RTU'S ARE SELECTED WITH THIS FLUID AS THE WORKING FLUID.
- PRE-FILTER AND FINAL FILTER FRAMES SHALL HAVE GASKETS TO ENSURE A PROPER SEAL BETWEEN THE FRAME AND FILTER.
- UNIT MOUNTED VFD'S ARE NOT TO BE INSTALLED MORE THAN 6'-7" ABOVE FINISHED ROOF.
- EACH INDIVIDUAL FAN CUBE SHALL BE PROVIDED WITH INTEGRAL CO-PLANAR SILENCER FOR SOUND REDUCTION ALONG WITH ZERO LOSS VERTICAL BLADE BACKRAFT DAMPER.

WALL-MOUNTED LOUVER SCHEDULE

MARK		L-1	
APPLICATION	---	EXHAUST	
AIR FLOW (DESIGN)	CFM	500	
WIDTH x HEIGHT	IN.	18 x 18	
FREE AREA	SQ. FT	0.77	
THICKNESS	IN.	5	
PRESSURE DROP (MAX)	IN. WG	0.1	
MAX VELOCITY	FT. PM	8.0	
MANUFACTURER	---	UNITED ENTERTECH	
MODEL	---	D-HV-5	
NOA #	---	25-0819.01	
NOTES:	1. ALUMINUM HURRICANE LOUVER WITH HORIZONTAL FRONT & VERTICAL REAR BLADES. 2. PROVIDE WITH 3/4" x 0.050" ALUMINUM BIRD SCREEN. 3. NOA RATED, WIND RATED, AMCA 500/540/550 LOUVER. 4. SUBMIT FACTORY COLOR CHART TO ARCHITECT FOR FINISH COLOR.		
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CONSTANT / VARIABLE AIR VOLUME BOX SCHEDULE
WITH ELECTRIC HEAT

MARK	B1.1	B1.2	B1.3	B1.4	B1.5	B1.6	B1.7	B1.8	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B2.8	B2.9	B2.10	B2.11	B2.12	B2.13
AREA SERVED	OR #2	OR #1	PROC. RM #2	PROC. RM #1	CIRC	ANES. WORK	CLEAN ASSEMBLY	DECON	RECEPTION	LOCKERS	IT ROOM	STAFF LOUNGE	BREAKDOWN RM	RECOVERY	MEDS ROOM	NURSE STATION	SOLED WKRM	RECOVERY	RECOVERY	ASC LOBBY	RESTROOMS
AIR CFM - MAXIMUM	1650	1650	750	750	850	800	800	300	450	300	350	350	350	200	100	925	175	375	375	375	375
AIR CFM - MIN. OCCUPIED	1650	1650	750	750	850	800	800	300	450	300	350	350	350	200	100	925	175	375	375	375	375
AIR CFM - MIN. UNOCCUPIED	825	825	375	375	850	800	850	300	150	350	150	200	100	200	100	925	175	375	375	300	150
MANUFACTURER	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC	ENVIRO-TEC
MAX. UNIT PD IN. WC	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
MIN. INLET SP IN. WC	0.05	0.05	0.06	0.06	0.03	0.03	0.03	0.04	0.02	0.06	0.03	0.01	0.01	0.01	0.01	0.03	0.01	0.06	0.06	0.03	0.06
ENTERING AIR TEMP °F	43	43	43	43	43	43	43	53	53	53	53	53	53	53	53	53	53	53	53	53	53
LEAVING AIR TEMP °F HEAT	75	75	75	75	80	80	80	80	85	80	85	80	85	80	80	85	80	85	80	85	80
HEATING CAPACITY - KW	17.5	17.5	7.5	7.5	10	10	10	3	1.5	3	NONE	2	1	1.5	1	7.5	1.5	3	3	3	1
STEPS CONTROL	SCR	SCR	SCR	SCR	SCR	SCR	SCR	SCR	SCR	SCR	N/A	SCR	SCR	SCR	SCR	SCR	SCR	SCR	SCR	SCR	SCR
ELECTRICAL - V/PH	480/3	480/3	480/3	480/3	480/3	480/3	480/3	277/1	277/1	277/1	N/A	277/1	277/1	277/1	277/1	480/3	277/1	277/1	277/1	277/1	277/1
AMPS	21.06	21.06	9.03	9.03	12.03	12.03	12.03	10.83	5.42	10.83	0.00	7.22	3.61	5.42	3.61	9.03	5.42	10.83	10.83	10.83	3.61
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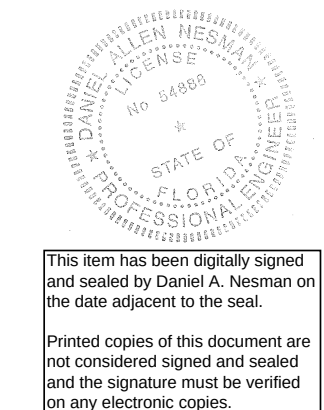
SCHEDULE NOTES:

- BASIS OF DESIGN: ENVIRO-TEC MODEL SDR-EH PRESSURE INDEPENDENT**
DOUBLE WALL CONSTRUCTION W/ 3/4" 4LB/FT3 INSULATION.
TOP AND BOTTOM ACCESS PLATES.
- COORDINATE WITH CONTROL SYSTEM INSTALLER FOR APPROPRIATE SELECTION OF THERMOSTATS AND COORDINATE WITH TEMPERATURE CONTROL SYSTEM FOR DDC OPERATION.
- CONTROL SYSTEM SUPPLIER WILL PROVIDE DDC CONTROLLERS FOR FACTORY INSTALLATION.
- PROVIDE NECESSARY CLEARANCE FOR MAINTENANCE.
- WHERE RUNOUT SIZE IS SHOWN ON DRAWING, FOLLOW DRAWING. EQUIVALENT RECTANGULAR DUCT SIZES MAY BE USED.
- BOXES SERVING OPERATING ROOMS, PROCEDURE ROOMS, AND RECOVERY AREAS SHALL OPERATE AT CONSTANT VOLUME. WHETHER IN OCCUPIED OR UNOCCUPIED MODE.



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AIRCAC OPG PROJECT #: 141490312-1912

SEAL



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DEUK SPINE
INSTITUTE
Surgery Center at Millenia, LLC

Hunton Brady
ARCHITECTS

DATE	SUBMISSION	NO
12.12.2023	CONSTRUCTION DOCUMENTS	
05.19.26	CCD NO. 1	1
08.07.26	CCD #2R	2

MECHANICAL SCHEDULES

PROJ. NO.	H-23016.00	SHEET
DRAWN	OA	
M700A		