

FAN POWERED VARIABLE AIR VOLUME TERMINAL SCHEDULE (ELEC. HEAT)

DESIGNATION	13-2-M5	13-2-T3	
ASSOCIATED AIR HANDLER	EXIST. AHU	EXIST. AHU	
SERVICE	BOARD ROOM 201	CONFERENCE 225	
UNIT	MANUFACTURER	TITUS	TITUS
	MODEL NO.	DIFS	DIFS
	CONFIGURATION	SERIES	SERIES
	UNIT SIZE	D	B
	INLET SIZE	12	8
FAN DATA	DESIGN AIRFLOW (CFM)	1400	575
	MIN. AIRFLOW (CFM)	400	300
	FAN AIRFLOW (CFM)	1400	575
	EXTERNAL STATIC PRESSURE (IN. W.C.)	0.3	0.3
	MOTOR (HP)	0.50	0.33
ELEC. HT. COIL	VOLTS/PHASE	277V / 1PH	277V / 1PH
	COIL EAT (DEG. F)	66	62
	UNIT LAT (DEG. F)	75	75
	HEATING CAPACITY (KW)	5.0	3.0
	CONTROL STEPS	SCR	SCR
UNIT ELEC. DATA	VOLTS/PHASE	480V/3	480V/3
	PANEL & CIRCUIT	13H4N2B.1	13H4N2B.1
	WIRE & CONDUIT	(4)#12, #12G, 3/4" C	(4)#12, #12G, 3/4" C
	OVERCURRENT DEVICE	NOTE 2	NOTE 2
	DISCONNECT	INTEGRAL	INTEGRAL
REFERENCE DRAWING/DETAIL	M100	M100	
CONTROL	DDC	DDC	
REMARKS	1	1	

- NOTES:
- PROVIDE WITH ECM MOTOR
 - FURNISH AND INSTALL 3P-20A BREAKER IN EXISTING PANEL SPACE. FIELD VERIFY BREAKER SPECIFICATIONS.

FAN COIL UNIT SCHEDULE

DESIGNATION	FCU-2C	
BUILDING	ASPIRIA 6480	
LEVEL SERVED	LEVEL 2	
UNIT	MANUFACTURER	ENVIRO-TEC
	MODEL	HDD-08
	MOUNTING	SUSPENDED
	DRIVE	DIRECT
	OUTSIDE AIR (CFM)	0
COOLING COIL	AIRFLOW (CFM)	750
	E.S.P. (IN. WG)	0.5
	TOTAL CAP. (MBH)	12
	SENS. CAP. (MBH)	16.1
	ENT. AIR TEMP. (°F)	75 / 60
HEATING COIL	LVG. AIR TEMP. (°F)	55 / 54
	GPM	3.8
	EWT (°F)	42
	LWT (°F)	56
	MAX WATER PRESS. DROP (FT. H2O)	15
FILTER	TOTAL CAP. (MBH)	--
	ENT. AIR TEMP. (°F)	--
	LVG. AIR TEMP. (°F)	--
	GPM	--
	EWT (°F)	--
ELECTRICAL DATA	LWT (°F)	--
	MAX WATER PRESS. DROP (FT. H2O)	--
	TYPE	1" PLEATED
	MERV	8
	MOTOR HP	1/2
	FLA	7.46
	VOLTAGE/PHASE	120/1
	PANEL & CIRCUIT	13P2N2B.4
WIRE & CONDUIT	(2)#12, #12G, 1/2" C	
REFERENCE DRAWING/DETAIL	OVERCURRENT DEVICE	20A
	DISCONNECT	YES
	STARTER	-
	COMBINATION STARTER	YES
CONTROL SEQUENCE	T-STAT	
REMARKS	1,2,3	

- NOTES:
- PROVIDE WITH ECM MOTOR FOR 0-10V SIGNAL. SZVAV CONTROL BY CONTROL CONTRACTOR.
 - CONTROLLER AND PIPING ACCESS TO BE ON THE SAME SIDE. FURNISH UNIT WITH RIGHT OR LEFT HAND COIL CONNECTIONS AND CLEARANCES. REFER TO PLANS FOR CONFIGURATION.
 - FURNISH UNIT WITH FILTER RACK.

DUCTWORK SCHEDULE

SERVICE	DUCT SHAPE	SMACNA REQUIREMENTS			LINER REQUIREMENTS	INSULATION REQUIREMENTS	OTHER REQUIREMENTS
		CLASSIFICATION	SEAL CLASS	LEAKAGE CLASS			
LOW PRESSURE SUPPLY DUCTWORK CONNECTED TO SINGLE ZONE AIR HANDLING UNITS, SINGLE ZONE VAV AIR HANDLING UNITS, SINGLE ZONE PACKAGED ROOFTOP UNITS, SINGLE ZONE VAV PACKAGED ROOFTOP UNITS, DOWNSTREAM OF TERMINAL UNITS, WATER-SOURCE HEAT PUMP UNITS.	RECTANGULAR	2" WG POSITIVE	B	12	1", 3LB DENSITY LINER	---	PAINTABLE WHERE EXPOSED
	ROUND (CONCEALED)	4" WG POSITIVE SPIRAL SEAM	B	3	---	1-1/2", 1.5 LB. FIBERGLASS BLANKET, VAPOR-BARRIER FACED, WITH HEAVY DUTY FOIL-SCRM-KRAFT FACING	PAINTABLE WHERE EXPOSED
	ROUND (EXPOSED)	4" WG POSITIVE SPIRAL SEAM	B	3	---	---	PAINTABLE WHERE EXPOSED
MEDIUM PRESSURE SUPPLY DUCTWORK CONNECTED TO VAV AIR HANDLING UNITS, VAV PACKAGED ROOFTOP UNITS, UPSTREAM OF TERMINAL UNITS.	RECTANGULAR (WITHIN FIRST 100 FT OF UNIT CONNECTION)	6" WG POSITIVE	A	3	---	1-1/2", 1.5 LB. FIBERGLASS BLANKET, VAPOR-BARRIER FACED, WITH HEAVY DUTY FOIL-SCRM-KRAFT FACING	---
	RECTANGULAR (CONCEALED)	4" WG POSITIVE	A	3	---	1-1/2", 1.5 LB. FIBERGLASS BLANKET, VAPOR-BARRIER FACED, WITH HEAVY DUTY FOIL-SCRM-KRAFT FACING	---
	RECTANGULAR (EXPOSED)	4" WG POSITIVE	A	3	---	1-1/2", 3 LB. RIGID FIBERGLASS BOARD, VAPOR-BARRIER FACED, WITH HEAVY DUTY FOIL-SCRM-KRAFT FACING AND PAINTABLE JACKET	PAINTABLE WHERE EXPOSED
	ROUND	10" WG POSITIVE SPIRAL SEAM	B	3	---	1-1/2", 1.5 LB. FIBERGLASS BLANKET, VAPOR-BARRIER FACED, WITH HEAVY DUTY FOIL-SCRM-KRAFT FACING	---
RETURN/TRANSFER AIR DUCTWORK	RECTANGULAR	2" WG NEGATIVE	B	12	1", 3LB DENSITY LINER	---	PAINTABLE WHERE EXPOSED
	ROUND	2" WG NEGATIVE	A	3	---	---	PAINTABLE WHERE EXPOSED

PIPING MATERIAL SCHEDULE - HVAC

SERVICE	PIPE SIZE	PIPE MATERIAL	FITTINGS
CONDENSATE DRAIN	1/2" - 1-1/2"	DRAWN-TEMPER COPPER TUBE, SEAMLESS, TYPE K OR L	WROUGHT COPPER SOLDER OR PRESSFIT
	2" AND LARGER	SCHEDULE 40, GRADE B, STEEL PIPE	SCHEDULE 40 STEEL, THREADED
CHILLED WATER SUPPLY AND RETURN	2" AND SMALLER	DRAWN-TEMPER COPPER TUBE, SEAMLESS, TYPE K OR L	WROUGHT COPPER SOLDER OR PRESSFIT
	2-1/2" AND LARGER	SCHEDULE 40, GRADE B, STEEL PIPE	GROOVED, MECHANICAL JOINT COUPLING AND FITTING OR WROUGHT-STEEL FITTINGS AND WELDED JOINTS

GRILLE, REGISTER & DIFFUSER SCHEDULE

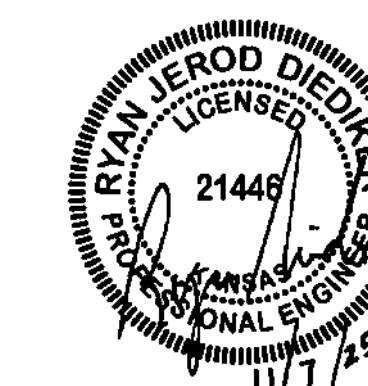
PLAN MARK	MANUFACTURER	MODEL NUMBER	SERVICE	MOUNT TYPE	VOLUME DAMPER	MATERIAL	COLOR	MAX NC	NOTES
SD-1	TITUS	OMNI	SUPPLY	LAY-IN	NOTE 1, 2	STEEL	WHITE	25	
SD-2	TITUS	FL-20 (1 SLOT)	SUPPLY	SURFACE	NOTE 1, 2, 4	ALUMINUM	WHITE	25	5
SD-3	TITUS	S300FS	SUPPLY	DUCT	NOTE 1, 2, 4, 7	ALUMINUM	NOTE 3	25	5
RS-1	TITUS	335 RC	RETURN	LAY-IN	NO	STEEL	NOTE 3	25	
RG-2	TITUS	FL-20 (1 SLOT)	RETURN	SURFACE/LAY-IN	NO	ALUMINUM	BLACK	25	5, 6

- NOTES:
- PROVIDE VOLUME DAMPER IN BRANCH DUCTWORK AHEAD OF EACH DIFFUSER OR GRILLE CONNECTION.
 - PROVIDE REMOTE DAMPER ACTUATOR FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS.
 - FURNISH WITH WHITE FINISH FOR CEILING MOUNTED APPLICATIONS AND PAINTABLE FINISH FOR WALL MOUNTED APPLICATIONS.
 - PROVIDE REMOTE DAMPER ACTUATOR FOR DAMPERS LOCATED ABOVE INACCESSIBLE CEILINGS.
 - PROVIDE FLANGED DIFFUSER WITH END CAPS FOR SURFACE MOUNTING.
 - FURNISH WITH LIGHT SHIELD.
 - FURNISH AND INSTALL WITH OPPOSED BLADE DAMPER.

PIPE INSULATION SCHEDULE - HVAC

SERVICE	PIPE SIZE	INSULATION	NOTES
CONDENSATE DRAIN	1/2" - 1-1/2"	1/2" FIBERGLASS, ASJ	1,2,3,4,5
	2" AND LARGER	1" FIBERGLASS, ASJ	
REFRIGERANT SUCTION	ALL	1/2" FLEXIBLE CLOSED CELL ELASTOMER/C	
REFRIGERANT HOT GAS	ALL	1/2" FLEXIBLE CLOSED CELL ELASTOMER/C	

- NOTES:
- FOR ALL PIPING 2-1/2" AND LARGER, PROVIDE RIGID FOAM INSERTS AT ALL HANGERS AND SUPPORT LOCATIONS.
 - ELBOW AND FITTING INSULATION SHALL BE OF SAME THICKNESS AS ADJACENT STRAIGHT PIPE INSULATION.
 - FITTING INSULATION TO HAVE ASJ OR SUPPLEMENTAL VAPOR BARRIER SEALED TO ADJACENT PIPE INSULATION.
 - PROVIDE PVC JACKET ON ALL FITTINGS AND ELBOWS IN EXPOSED AREAS.
 - PROVIDE PVC JACKET ON ALL PIPING IN MECHANICAL ROOMS.



Security Benefit

6480 Sprint Parkway, 2nd Floor
Overland Park, KS 66211

rev	issue	date
	Design Development Set	09.11.2025
	Bid and Permit Set	10.09.2025
	ADDENDUM 3	10.24.2025
	CITY COMMENTS	TBD

24.08 Security Benefit

ME301

MECHANICAL AND ELECTRICAL SCHEDULES