

TABLE OF SYSTEMS COMPONENTS				
SYSTEM No.	N°	Description	Components Dimensions	Remarks
AHU-1 GENERAL VENTILATION	1	Mixing box	762 x 1422 x 1320 high	AD with VP, IL, TP
		Outside air intake	560 x 1066 back end	PBD
		Return air intake	560 x 1066 on top	PBD
	2	Pre-Filterers and Filters section	610 x 1422 x 1320 high	AD with VP, IL, TP
		Pre-filterers	2 x 610 x 610 x 100 + 2 x 508 x 610 x 100	FG
		Filters	2 x 610 x 610 x 300 + 2 x 508 x 610 x 300	FG
VRE-1 OUTSIDE/EXHAUST AIR ENERGY RECOVERY	3	Heating coil	813 x 1422 x 1320 high	AD with VP, IL, TP
	4	Supply fan	1168 x 1422 x 1320 high	AD with VP, IL, TP, EO, LS
		total	3353 x 1422 x 1320 high	
	1	Module #1	1264 x 1120 x 1295 high	AD
		Energy recovery core, above	1264 x 1120 x 647 high	AD with VP, IL, MP
		Exhaust fan, under	1264 x 1120 x 647 high	AD with VP, IL, MP
AE-1 AIR EXCHANGER CRAWL SPACE	2	Module #2	943 x 1120 x 1295 high	AD with VP, IL, MP
		Change over dampers section	1264 x 1120 x 1295 high	LS, EO
	3	Module #3	1264 x 1120 x 1295 high	AD with VP, IL, MP, FG
		Filters and supply fan, above	1264 x 1120 x 647 high	AD
		Energy recovery core, under	1264 x 1120 x 647 high	AD
		total	3470 x 1120 x 1295 high	
SF-1 MEC/ELEC ROOM VENTILATION	1	Heat recovery unit	1144 x 1231 x 399	
		Exhaust fan		
		High efficiency filter		
		heat recovery core		
		Supply fan		
	1	Centrifugal square inline fan	355 x 558 x 673 high	
	2	Filter box for standard size merv 8	397 x 575 x 362 high	
		total	397 x 1150 x 673 high	

Legend

AD: Access door
VP: Viewing port
IL: Interior lighting : LED light kit
VME: Sealed motorized damper
VMEB: Sealed isolated motorized damper
TP: Testing port
FG: Filter gauge

EO: Electrical duplex outlet outside the unit
PBD: Parallel blades damper
FSC: Fan safety screen
PFD: Plenum Fan damper
OBD: Opposed blades damper
LS: Light switch outside the unit

FILTER SCHEDULE														
System	Filter ID	Total Flow L/s	Filter Type	W mm	H mm	Thickness mm	Qty	Efficiency MERV	Area m²	Flow per filter L/s	Face velocity m/s	Initial (2.54 m/s) Pa	Final Pa	Remarks
AHU-1	F-1	2,785	pleated	610	610	102	2	8	0.7	1,520	2.0	50.0	250.0	1, 2
			pleated	508	610	102	2	8	0.6	1,265	2.0	50.0	250.0	1, 2
	F-2	2,785	cartridge	610	610	305	2	14	0.7	1,520	2.0	112.5	375.0	1, 2
			cartridge	508	610	305	2	14	0.6	1,265	2.0	112.5	375.0	1, 2
			Total Filtration Area =		1.4									
			Total Filtration Area =		1.4									
VRE-1	F-1	1,272	pleated	508	508	50	2	10	0.5	1,272	2.5	50.0	250.0	1, 2
				Total Filtration Area =		0.5								
AE-1	F-1	260	pleated	610	250	50	2		0.3	260	0.9	50.0	250.0	1, 2
				Total Filtration Area =		0.3								
SF-1	F-1	135	pleated	610	305	50	2	8	0.4	135	0.4	50.0	250.0	1, 2
				Total Filtration Area =		0.4								

Remarks:

1. The initial static pressure drop is based upon an air speed of 2.54 m/s

2. The final static pressure drop is based upon the maximum allowable pressure drop recommended by the manufacturer

FAN CHART																		
System	Identification	Fan Type	Wheel Dia. mm	Blade Type	Class	Material Type	Arr't	Airflow L/s	E.S.P. Pa	T.S.P. Pa	Drive Type	Fan RPM operating rpm	Fan RPM maximum rpm	Fan BHP	Motor HP (Amps)	Fan Operating Hz	Volts/ph/Hz	Notes
AHU-1	SF-1	DD-CP	508	airfoil	II	AL	-	2,835	500	1,215	VFD	2,311	2,674	6.4	7.5	77	575/3/60	1 to 6
VRE-1	EF-1	DD-CP				AL		1,036	188	325	VFD	1,684	4,000	0.7	1.5	58	575/3/60	1 to 6
	SF-1	DD-CP				AL		1,272	375	725	VFD	2,094	4,000	2.1	3.0	73	575/3/60	1 to 6
AE-1	EF-1							285	145		MC				(2.9)	60	208/1/60	1 to 6
	SF-1							260	180		MC				(2.9)	60	208/1/60	1 to 6
SF-1	-	BD-IL	254			AL		135	-	375	MS	2,763	-	0.4	0.5	60	575/3/60	

Legend:

AT: Roof axial
BA: Backward Airfoil
CP: Centrifugal Plenum
CB: Backward inclined centrifugal
CF: Forward inclined centrifugal
CM: Wall centrifugal
CT: Roof centrifugal
MS: Magnetic Starter

H: Propeller
IL: In line
V: Vane axial
VFD: Variable Frequency Drive
AL: Aluminum
DD: Direct Drive
MC: Manufacturer's controller
BD: Belt Drive

Notes:

1. All motors should operate at 1800 rpm unless otherwise specified

2. All motors should be TEFC unless otherwise specified

3. All motors should be Premium Efficiency

4. All motors should be inverter duty

5. All motors combined with a VFD should be equipped with a shaft grounding ring

6. All VFD's are supplied by the system's manufacturers

METALLIC DUCT CONSTRUCTION - PRESSURE CLASS							
System identification	Description	Total air flow l/s	Total static pressure Pa	Outside air intake (1) Pa	Supply (2) Pa	Return or exhaust (3) Pa	Special material (5) Notes
AHU-1	General ventilation	2,835	1,215.0	-1000	1000/500	-500/-1000	-
VRE-1	Outside air / exhaust air	1,272	725.0	1500	1000/500	-500/-1000	1500
AE-1	Crawl space ventilation	260	180.0	-500	500	-500	500
SF-1	Mec/elec. Room ventilation	135	375.0	-500	500	-500	500

Duct run from the outside air intake up to the system

Duct run from the system towards the supply grilles and diffusers. If 2 values are shown, the first is for inside the mechanical room

Duct run from the return grilles towards the system. If 2 values are shown, the second is for inside the mechanical room

Duct run from the system towards the exhaust air louver

Special material: Stainless steel (SS) or aluminum (AL) or welded black steel (BS), if no value specified the ducts shall be of galvanized steel

