

DEDICATED OUTDOOR AIR UNIT SCHEDULE

TAG	SUPPLY FAN (C/W VFD)			RETURN FAN (C/W VFD)			PREHEAT COIL					HEATING COIL (HEAT PUMP)					COOLING COIL (HEAT PUMP)							ENERGY RECOVERY WHEEL (SUMMER)				ENERGY RECOVERY WHEEL (WINTER)				FILTERS		OPERATING WEIGHT (KG)	ELECTRICAL SERVICE			NOTES			
							FLUID (40% P. GLYCOL)					FLUID (40% P. GLYCOL)					FLUID (40% P. GLYCOL)																								
	AIR FLOW (L/S)	E.S.P. (PA)	MOTOR (KW)	AIR FLOW (L/S)	E.S.P. (PA)	MOTOR (KW)	FLOW (L/S)	P.D. (KPA)	EFT/LEFT (°C)	EAT/LAT (DB°C)	TOTAL CAPACITY (KW)	FLOW (L/S)	P.D. (KPA)	EFT/LFT (°C)	EAT DB/WB (°C)	LAT DB (°C)	TOTAL CAPACITY (KW)	FLOW (L/S)	P.D. (KPA)	EFT/LFT (°C)	EAT DB/WB (°C)	LAT DB/WB (°C)	TOTAL CAPACITY (KW)	SENSIBLE CAPACITY (KW)	EER	TOTAL HEAT REJECTION (KW)	O/A TEMP. (°C DB/WB)	R/A TEMP. (°C DB/WB)	TOTAL EFFICIENCY	S/A TEMP. (°C DB/WB)	O/A TEMP. (°C DB/WB)	R/A TEMP. (°C DB/WB)	TOTAL EFFICIENCY	S/A TEMP. (°C DB/WB)	PRE (MERV)	FINAL (MERV)	V/PH/Hz	MCA (A)	VFD (Y/N)		
DOAS-1	1180	250	1.50	1085	250	0.75	0.56	33.5	15.5 / 10	-23 / -15	12	1.40	29.6	15.5 / 11	25 / 18.5	35	32	1.40	29.6	43.3 / 49	25 / 18.5	12.6 / 12.3	25.30	18	11	33	29 / 23	24 / 17	80.6%	25 / 18.5	-19 / -19.5	22 / 12	81.5%	12 / 6	7	13	1172	460/3/60	21	Y	1, 2, 3, 4, 5

NOTES:
1. UNIT TO BE PROVIDED WITH MARINE LIGHTS, POWER RECEPTACLES AND TEST PORTS.
2. UNIT TO BE COMPLETE WITH SINGLE 460/3PH/60HZ POWER CONNECTION. PROVIDE SEPARATE 120 V CONNECTION POWER CIRCUIT FOR LIGHTS AND RECEPTACLES.
3. COOLING COIL SHALL NOT EXCEED 900MM IN HEIGHT.
4. UNIT TO BE PROVIDED WITH DAMPERS ON O/A, E/A, AND R/A CONNECTIONS.
5. UNIT DIMENSIONS TO BE 3625MM X 1550MM X 1500MM (LXWXH)

EXPANSION TANK SCHEDULE

TAG	SERVICE	TANK VOLUME (L)	TANK ACCEPTANCE (L)	DIAMETER (MM)	HEIGHT (MM)	MAX. RATED TEMPERATURE (°C)	MAX. RATED PRESSURE (KPA)	CHARGE PRESSURE (KPA)	NOTES
ET-1	DOMESTIC HOT WATER	16	12	300	400	93	1035	80	2
ET-2	CONDENSER LOOP	30	10	300	450	115	689	105	1

NOTES:
1. TANK TO BE NON-ASME VERTICAL DIAPHRAGM TYPE
2. TANK TO BE NON-ASME VERTICAL BLADDER TYPE, LEAD FREE , STAINLESS STEEL CONNECTIONS FOR POTABLE WATER USE

FORCE FLOW HEATER / DUCT HEATER SCHEDULE

TAG	SERVICE	ARRANGEMENT	SUPPLY FAN		HEATING				ELECTRICAL (V/PH/Hz)	MCA (A)	NOTES	
			AIR FLOW (L/S)	E.S.P. (PA)	E.A.T (DB°C)	TOTAL CAPACITY (KW)	FLUID FLOW (L/S)	FLUID P.D. (KPA)				HEATING TYPE
FFH-1	P114	CEILING RECESSED, FRONT INLET, FRONT OUTLET	150	0	15.0	4.0	N/A	N/A	ELECTRIC	347/1/60	-	1, 3, 4
FFH-2	P136	CEILING RECESSED, FRONT INLET, FRONT OUTLET	150	0	15.0	4.0	N/A	N/A	ELECTRIC	347/1/60	-	1, 3, 4
FFH-3	P128	CEILING RECESSED, FRONT INLET, FRONT OUTLET	141	0	15.0	7.5	0.16	5.4	HOT WATER	115/1/60	< 15	1, 3, 4
FFH-4	A149 VESTIBULE	WALL RECESSED, FRONT INLET, FRONT OUTLET	95	0	15.0	4.7	0.10	1.8	HOT WATER	115/1/60	< 15	1, 3, 4
FFH-5	A203A	CEILING RECESSED, FRONT INLET, FRONT OUTLET	95	0	15	4.7	0.10	1.8	HOT WATER	115/1/60	< 15	1, 3, 4
FFH-6	A203	WALL EXPOSED, FRONT INLET, FRONT OUTLET	95	0	15	4.7	0.10	1.8	HOT WATER	115/1/60	< 15	2, 3, 4

NOTES:
1. COMPLETE WITH UNIT MOUNTED THERMOSTAT
2. COMPLETE WITH REMOTE LINE VOLTAGE THERMOSTAT AND LOCKABLE COVER.
3. BAR GRILLE INLET AND OUTLET
4. COLOUR TO MATCH CEILING OR WALL FINISH

DUCT HEATER SCHEDULE

TAG	TYPE	SIZE	AIR FLOW (L/S)	E.A.T (DB°C)	TOTAL CAPACITY (KW)	PRESSURE DROP (PA)	HEAT TYPE	ELECTRICAL (V/PH/Hz)	NOTES
DH-1	FLANGE CONECTIONS	250X300	212	15.0	5.7	60	ELECTRIC	600/3/60	1, 2

NOTES:
1. COMPLETE WITH REMOTE LINE VOLTAGE THERMOSTAT AND LOCKABLE COVER
2. COMPLETE WITH FAN INTERLOCK RELAY AND FAN DELAY

TERMINAL UNIT SCHEDULE

TAG	TYPE	SIZE	AIR FLOW (L/S)	AIR P.D. (PA)	REHEAT COIL (Y/N)	FLUID FLOW (L/S)	NOTES
BPB-1	LOW PRESSURE BYPASS	8	235	2	Y	0.03	1, 2, 3

NOTES:
1. TERMINAL UNIT C/W SOUND ATTENUATOR.
2. TERMINAL UNITS TO BE COMPLETE WITH TRANSFORMERS.
3. FOR SUPPLY TERMINAL UNITS: ENTERING AIR TEMPERATURE 12.8°C / LEAVING AIR TEMPERATURE 40°C / ENTERING WATER TEMPERATURE 82°C / LEAVING WATER TEMPERATURE 71°C

DIFFUSER, GRILLE, REGISTER AND LOUVRE SCHEDULE

TAG	SERVICE	MOUNTING	COLOUR	NOTES
S-1	S/A	LAY-IN	WHITE	SQUARE PLAQUE DIFFUSER, 300MMX300MM DIFFUSER WITHIN 600MMX600MM CEILING MODULE. STEEL CONSTRUCTION, POWDER COAT FINISH. REFER TO PLANS FOR CONNECTION SIZES AND LOCATIONS. PROVIDE COMPLETE WITH MOUNTING KIT FOR DRYWALL INSTALLATION.
S-2	S/A	LAY-IN	WHITE	SQUARE PLAQUE DIFFUSER, 600MMX600MM MODULE. STEEL CONSTRUCTION. POWDER COAT FINISH. REFER TO PLANS FOR CONNECTION SIZES AND LOCATIONS. PROVIDE COMPLETE WITH MOUNTING KIT FOR DRYWALL INSTALLATION.
S-3	S/A	SURFACE	WHITE	LOUVERED SUPPLY. SINGLE DEFLECTION. BLADES ARRANGED PARALLEL TO SHORT DIMENSION AND SPACED 20MM ON CENTRE. 32MM BORDER, COUNTERSUNK SCREWHOLES WITH OVAL-HEAD SCREWS, POWER COAT FINISH. COMPLETE WITH OPPOSED BLADE BALANCING DAMPER. REFER TO PLANS FOR SIZES AND LOCATIONS.
S-4	S/A	SURFACE	WHITE	LINEAR BAR GRILLE DIFFUSER, POWDER COAT FINISH. 13MM SPACING OF 3MM BARS, 0° DEFLECTION, 25MM BORDER WIDTH, CONCEALED FASTENING. COMPLETE WITH OPPOSED BLADE DAMPERS. REFER TO DRAWINGS FOR LOCATIONS AND SIZES.
S-5	S/A	CEILING SUSPENDED	WHITE	1200MM LINEAR DIFFUSER, 1-SLOT, 25MM WIDE, ALUMINUM CONSTRUCTION, POWDER COAT FINISH, COMPLETE WITH ENGINEERED SUPPLY AIR PLENUM, DIFFUSER TO INCLUDE FLUSH END CAP. CONCEALED FASTENING.
S-6	S/A	SURFACE	WHITE	1200MM LINEAR DIFFUSER, 1-SLOT, 38MM WIDE, ALUMINUM CONSTRUCTION, POWDER COAT FINISH, FABRICATED PLENUM TO SUIT SITE INSTALLATION, DIFFUSER TO INCLUDE MITERED END CAPS. CONCEALED FASTENING.
S-7	S/A	LAY-IN	WHITE	SQUARE PLAQUE VAV DIFFUSER, ELECTRONIC DDC CONTROL, 600MMX600MM DIFFUSER, STEEL CONSTRUCTION, POWDER COAT FINISH. REFER TO PLANS FOR CONNECTION SIZES AND LOCATIONS. PROVIDE COMPLETE WITH MOUNTING KIT FOR DRYWALL INSTALLATION. PROVIDE COMPLETE WITH 115V TRANSFORMER AND BACNET MODULE FOR CONNECTION TO BAS.
R-1	R/A	LAY-IN	WHITE	EGGCRATE, 13X13X13 ALUMINIUM GRID CORE, POWDER COAT FINISH. REFER TO PLANS FOR SIZES AND LOCATIONS. INCLUDE MOUNTING FRAME FOR DUCTED CONNECTIONS AND DRYWALL INSTALLATIONS AS REQUIRED.
R-2	R/A	SURFACE	WHITE	1500MM LINEAR DIFFUSER, 1-SLOT, 75MM WIDE, ALUMINUM CONSTRUCTION, POWDER COAT FINISH. DIFFUSER TO INCLUDE MITERED END CAPS. CONCEALED FASTENING. DUCT MOUNTED.
E-1	E/A	SURFACE	WHITE	EGGCRATE, COUNTERSUNK SCREW HOLES WITH OVAL SCREWS, 13X13X13 ALUMINIUM GRID CORE, POWDER COAT FINISH. REFER TO PLANS FOR SIZES AND LOCATIONS. C/W OPPOSED BLADE STEEL DAMPER.
LVR-1	S/A, E/A	SURFACE	-	REFER TO MECHANICAL SPECIFICATIONS FOR PERFORMANCE AND FINISH.
LVR-2	S/A, E/A	SURFACE	-	REFER TO MECHANICAL SPECIFICATIONS FOR PERFORMANCE AND FINISH.

DOAS UNIT SOUND POWER SCHEDULE

TAG	SOURCE	MAXIMUM FAN SOUND POWER LEVEL FOR UNIT ENCLOSURE							
		OCTAVE BAND (DISCHARGE/RETURN)							
		63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
DOAS-1	SA OUTLET	45	54	64	72	79	75	71	64
	EA INLET	66	66	68	70	74	69	65	60

WALL FIN RADIATOR SCHEDULE

TAG	SERVICE	ARRANGEMENT	ROWS	TOTAL CAPACITY (KW)	E.W.T (°C)	L.W.T (°C)	NOTES
RAD-1	A149	WALL MOUNTED, TOP OUTLET	1.0	1.4	82	71	1

NOTES:
1. ENTERING AIR TEMPERATURE TO BE 18°C

VIBRATION ISOLATION SCHEDULE

EQUIPMENT TYPE	LOCATION	ISOLATOR TYPE	MINIMUM DEFLECTION (MM)	NOTES
SUSPENDED EXHAUST FAN	VARIOUS	H2	25.0	2
FAN COIL UNIT	VARIOUS	H2	25.0	2
INLINE PUMP	MECHANICAL ROOM	H3	37.0	1

NOTE:
1. PROVIDE H2 OR M3 ISOLATORS ON ADJACENT PIPING
2. REFER TO SPECIFICATIONS FOR ISOLATOR TYPE

BOILER SCHEDULE

TAG	SERVICE	FUEL	HEATING INPUT (KW)	HEATING OUTPUT (KW)	E.W.T / L.W.T (°C)	EFFICIENCY (A.F.U.E)	FLOW (L/S)	P.D. (KPA)	ELECTRICAL SERVICE (V/PH/Hz)	FOOT PRINT LxWxH (MM)	WEIGHT (KG)	NOTES
B-1	CONDENSER LOOP	NATURAL GAS	62	57	32 / 17	96%	0.82	37.7	115/1/60	400X380X850	70	1, 2, 3, 4, 5, 6
B-2	CONDENSER LOOP	NATURAL GAS	62	57	32 / 17	96%	0.82	37.7	115/1/60	400X380X850	70	1, 2, 3, 4, 5, 6

NOTES:
1. BOILERS TO HAVE LOW NOx OPERATION.
2. BOILERS TO BE DIRECT VENT AND SEALED SIDEWALL COMBUSTION. VENT AND COMBUSTION AIR INTAKE TO BE CONSTRUCTED OF STAINLESS STEEL.
3. BOILERS TO BE C/W CONDENSATE NEUTRALIZATION KIT.
4. BOILERS TO BE COMPLETE WITH LOW LOSS HEADER AND WALL MOUNTING KIT.
5. MINIMUM NATURAL GAS SUPPLY PRESSURE 1 KPA, MAXIMUM NATURAL GAS SUPPLY PRESSURE 3.5 KPA
6. BOILER CONTROLLER CAPABLE OF CONTROLLING BOILER CIRCULATION PUMP.

DOMESTIC HOT WATER HEATER SCHEDULE

TAG	SERVICE	TYPE	HEATING INPUT (KW)	HEATING OUTPUT (KW)	RECOVERY @ 44°C (L/Hr)	TEMPERATURE RISE (°C)	STORAGE CAPACITY (L)	ELECTRICAL (V/PH/Hz)	MCA (A)	WEIGHT (KG)	NOTES
DWH-1	DOMESTIC HOT WATER	GAS - CONDENSING	58	55	1090	44	379	120/1/60	6.2	631	1, 2, 3, 4, 5

NOTES:
1. DOMESTIC HOT WATER HEATER TO HAVE AN INTEGRATED TOUCHSCREEN CONTROLLER CAPABLE OF COMMUNICATING WITH BAS OVER THE BACNET PROTOCOL
2. DOMESTIC HOT WATER HEATER TO COMPLY WITH ASHRAE 90.1 - 2010 EFFICIENCY RATING AND HAVE LOW-NOx OPERATION.
3. DOMESTIC HOT WATER HEATER TO BE DIRECT VENT, SEALED COMBUSTION THROUGH ROOF. VENT AND SEALED COMBUSTION TO BE CONSTRUCTED OUT OF STAINLESS STEEL.
4. TO BE C/W CONDENSATE NEUTRALIZATION KIT.
5. GAS OPERATING PRESSURE TO BE MAXIMUM 2.61 KPA.

FAN SCHEDULE

TAG	TYPE	SERVICE	AIR FLOW (L/S)	E.S.P (PA)	SONES	MOTOR (W)	MOTOR (RPM)	ELECTRICAL SERVICE (V/PH/Hz)	EMERGENCY POWER	FIRE ALARM CONNECTION	NOTES
EF-1	INLINE CENTRIFUGAL	NATURAL PAROLE BOARD MEETING ROOM	245	31	5.40	30	1300	115/1/60	N	N	1, 3
EF-2	INLINE CENTRIFUGAL	STORAGE ROOM E106A	55	25	2.50	9	1300	115/1/60	N	N	1, 2
EF-3	INLINE CENTRIFUGAL	IERT OFFICE A203C	130	31	3.90	19	1050	115/1/60	N	N	1, 2
F-1	INLINE CENTRIFUGAL	VESTIBULE P101	212	75	6.40	50	1300	115/1/60	N	N	4

NOTES:
1. COMPLETE WITH PARALLEL BLADE MOTORIZED DAMPER INTERLOCKED WITH FAN STARTER.
2. INCLUDE WALL MOUNTED LINE VOLTAGE SWITCH, MOUNT SWITCH 1200MM AFF ADAJENT TO ROOM LIGHT SWITCH.
3. FAN TO BE COMPLETE WITH LINE VOLTAGE TOGGLE SWITCH AND TIMER, TIMER TO BE SET TO RUN FAN FOR 60 MINUTES. MOUNT SWITCH 1200 AFF ADJACENT TO ROOM LIGHT SWITCH.
4. FAN TO BE INTERLOCKED WITH DUCT HEATER

DIALOG™

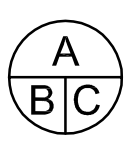
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PRINCIPAL ENTRANCE BUILDING

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MECHANICAL SCHEDULES

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