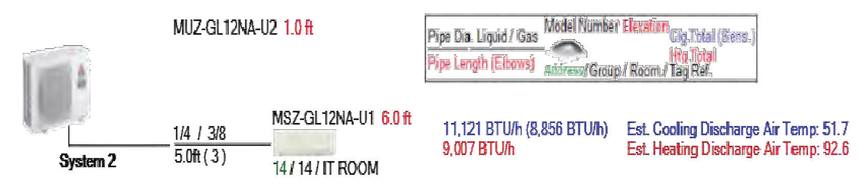
Centralized System - 1 : System 1

Piping Diagram Image (Design View)

Centralized System - 1 : System 1

Piping Diagram Image (Design View)



ECV-10H-VG-PM

Unit Performance

Design Conditions

Elevation (ft)	Summer DB (F)	Summer WB (F)	Winter DB (F)	Outdoor Air (CFM)	Exhaust Air (CFM)
23	91.0	77.0	5.0	710	710

Unit Specifications

Qty	Weight (lb)	Unit Installation	Unit ETL Listing
1	494 (+/- 5%)	Outdoor	UL 1812

Configuration

Outdoor Air		Exhaust Air	
Intake	Discharge	Intake	Discharge
End	Bottom	Bottom	End

Energy Recovery Performance

Design Condition	Temperature (F)								Capacity Reduction (BTU/h)
	Outdoor Air		Supply Air		Return Air		Exhaust Air		
	DB	WB	DB	WB	DB	WB/RH	DB	WB	
Summer	91.0	77.0	80.1	69.6	75.0	62.5/50	85.9	71.1	21,726.0
Winter	5.0	3.1	50.7	40.7	72.0	55.8/35	26.3	26.3	35,335.0

Air Performance

Type	Total Volume (CFM)	External SP (in. wg)	Total SP (in. wg)	FRPM	Fan Qty	Fan Type	Fan Drive-Type
Supply	710	0.5	0.669	1048	1	Forward Curve	Direct
Exhaust	710	0.5	0.613	1394	1	Forward Curve	Direct

Motor Specifications

Motor	Qty	Operating Power (hp)	Size (hp)	Enclosure	Efficiency	RPM
Supply	1	N/A	3/4	ODP	N/A	1750
Exhaust	1	N/A	3/4	ODP	N/A	1750

Electrical Specifications

Power Supply	Rating (V/C/P)	MCA (A)	MOP (A)	Fan Power (W/CFM)*
Unit	208/60/1	26.1	30.0	1.575

*Fan Power (W/CFM) = (Supply BHP + Exhaust BHP) / Supply CFM

Unit	
UL-1812	Std
Unit Installation - Outdoor	Std
Outdoor Air Filters - 2" MERV 8, 2-20x25	Std
Exhaust Air Filters - 2" MERV 8, 2-20x25	Std
Energy Recovery Device - Polymer Membrane Energy Recovery Core	Std
Unit Construction - Double Wall	X
Insulation - 1 inch R4 Fiberglass	Std
Corrosion Resistant Fasteners	Std
Access - Hinged	X
Factory Wired Non-Fused Disconnect Switch	Std
Unit Finish - Permatector, Concrete Gray (RAL 7023)	X
Single Point Power	Std
Supply Weatherhood: Downturn	Std
Exhaust Weatherhood: Downturn	Std
Two Direct Drive Forward Curved Blowers and VariGreen EC Motors	Std
Controls	
Unit Controls - Microprocessor	X
Sensors - OAI, OAD	Std
Unit On/Off Control - Microprocessor	X
Sensor Monitoring Package	
Heating Enable - None	
Cooling Enable - None	
Supply Fan Control - Network Control	X
Exhaust Fan Control - Network Control	X
Network Protocol - To Be Selected	
Exhaust Only Operation	
Economizer Control - Bypass Damper - Temperature	X
Control Accessories	
Remote Display	
CO2 Sensor	
Dirty Filter Sensor(s) - Both	X
Airflow Monitoring - Supply and Exhaust	X

Accessories	
Frost Control - 2.1 kW Electric Preheater	X
Spare Filters	
Shipped Loose Smoke Detectors	
Duct Flange	
Outdoor Air Damper - Low Leakage	X
Return Air Damper	
Service Outlet - 120 VAC GFCI Service Outlet, Shipped Loose	X
Damper End Switch	X
Roof Curb - GKD - 26.4/52.28-G14	X
Warranty Options	
Unit Warranty - 1 Yr (Standard)	Std
Energy Core Warranty - 5 Yrs	Std

Standard Option	Std
Not Included	
Included	X

Notes

Outdoor Air Damper supplied is low leakage, motorized VCD-23 (leakage rate of 3 CFM / ft^2 @ 1 in. wg), Class 1A

UNIT HEATER SCHEDULE (ELECTRIC)

APPROVALS: UL LISTED

MARK	MANUFACTURER TYPE & MODEL	COILS	WATTS	ENTERING AIR (°F)	BTU/HR.	ELECTRICAL DATA CFM	HP	VOLTS	PHASE	AMPS	REMARKS	LOCATION(S)
EUH-1	QMARK CWH3180F	1	1,800	40	6,138	100	–	120	1	15.0	WALL MNT.	DELIVERY RM.
EUH-2	QMARK CDF500	1	3,000	40	10,200	300	–	208	3	9.6	CLG. MNT.	SOUTH LOBBY

PROVIDE: DISCONNECT, OPTIONAL BMS RELAYS, WALL MOUNTED THERMOSTAT, RECESS CEILING KIT.

CEILING HVLS CIRCULATING FAN SCHEDULE

APPROVALS: UL

DESIGNATION	MAKE	MODEL	POWER SUPPLY VOLTAGE	PHASE	AMPS	MOCP	H.P	RPM	#AIRFOILS	WEIGHT	LISTINGS
VF-1	MACROAIR	8'	208	3	10.8	15	1.0	142	6	171 LBS.	UL

PROVIDE: CONTROLLER 30, CONTROL WIRING, MOUNTING, FIRE ALARM CONNECTION, SAFETY CABLE, BLADE RETAINER LINKS.

AIR PURIFIER SCHEDULE

DESIGNATION	MAKE	MODEL	POWER SUPPLY VOLTAGE	PHASE	AMPS	QTY	H.P	LISTINGS
AP-1	MAGNEGRIP	AIRHAWK 1000 XL	230	1	9	1	1.0	UL507/ETL

PROVIDE: PROGRAMMABLE TIMECLOCK AND ALL CONTROL WIRING BY MECHANICAL CONTRACTOR.

DEHUMIDIFIER SCHEDULE

DESIGNATION	POWER SUPPLY VOLTAGE	PHASE	MCA	MAX FUSE	MOISTURE REMOVAL	REFRIG.	CFM	MAKE	MODEL	LOCATION	NOTES
DH-1	120	1	8.42	15	70 PINTS	R-410A	120	LENNOX	HCWHD3-070	ATTIC AREAS	
DH-2	120	1	8.42	15	70 PINTS	R-410A	120	LENNOX	HCWHD3-070	ATTIC AREAS	

PROVIDE: DISCONNECT SWITCH, CONDENSATE PUMP & DRAIN, BACKFLOW DAMPER, 40VA TRANSFORMER, 10" DAMPERS, OUTDOOR TEMP SENSOR, DRAIN PAN.

UNIT HEATER SCHEDULE (GAS FIRED)

MARK	MANUFACTURER TYPE & MODEL	HEATING / BTU INPUT	OUTPUT	TEMP. RISE	F.L.A.	MOTOR DATA CFM	HP	VOLTS	PHASE	AMPS	WEIGHT	LOCATION(S)
UH-1	MODINE HDS-45	45,000	36,900	46°	3.75	720	1/15	120	1	3.8	60	NEW APPARATUS BAY
UH-2	MODINE HDS-45	45,000	36,900	46°	3.75	720	1/15	120	1	3.8	60	NEW APPARATUS BAY
UH-3	MODINE HDS-45	45,000	36,900	46°	3.75	720	1/15	120	1	3.8	60	NEW APPARATUS BAY
UH-4	MODINE HDS-45	45,000	36,900	46°	3.75	720	1/15	120	1	3.8	60	NEW APPARATUS BAY
UH-5	MODINE HDS-30	30,000	24,600	44°	3.75	505	1/15	120	1	3.8	55	GEAR AREA
UH-6	MODINE HDS-30	30,000	24,600	44°	3.75	505	1/15	120	1	3.8	55	UPPER ATTIC
UH-7	MODINE HDS-30	30,000	24,600	44°	3.75	505	1/15	120	1	3.8	55	UPPER ATTIC
UH-8	MODINE HDS-30	30,000	24,600	44°	3.75	505	1/15	120	1	3.8	55	UPPER ATTIC

1. PROVIDE AND INSTALL WALL MOUNTED LOW VOLTAGE THERMOSTAT WITH SUB-BASE.
2. PROVIDE AND INSTALL INTAKE AND EXHAUST PIPING, CONCENTRIC ROOF TERMINATION KIT WITH FLASHING.
3. PROVIDE LOCKING THERMOSTAT GUARD.
4. PROVIDE 24V TRANSFORMER.

EXHAUST FAN SCHEDULE

APPROVALS: UL

TAG	SERVICE	TYPE	FAN DATA CFM	S.P	AMPS	VOLT	PH	H.P.	RPM	DAMPER SIZE	ROOF OPENING	WEIGHT	GREENHECK MODEL NO	NOTES
EF-1	1ST FL RESTROOMS	ROOF	240	0.5	1.38	115	1	1/10	1,554	10x10	12.5x12.5	28	G-080-VG	–
EF-2	JAN. CLOSET	ROOF	70	0.35	1.3	115	1	0.02	1,578	10x10	10.5x10.5	21	G-60-VG	–
EF-3	2ND FL MENS RESTROOM	CLG	75	0.3	0.1	115	1	–	884	6"ø	–	12	SP-80-VG	–
EF-4	2ND FL WOMENS RESTROOM	CLG	75	0.3	0.1	115	1	–	884	6"ø	–	12	SP-80-VG	–

PROVIDE: ROOF CURBS, FLASHING, MOUNTING, HANGING/SPRING VIBRATION ISOLATION, FLEXIBLE CONNECTORS, BACKDRAFT DAMPERS, DISCONNECTS,

Sidewall Direct Drive Fan

MARK INFORMATION		FAN INFORMATION						MOTOR INFORMATION					
QTY	MARK	MODEL	VOLUME (CFM)	TOTAL EXTERNAL SP (IN WG)	FAN RPM	OPERATING POWER (HP)	WEIGHT (LB.)	SIZE (HP)	V/C/P	ENCLOSURE	MOTOR RPM	WINDINGS	NEC FLA*
1	EF-5	SE1-18-424-VG	2,250	0.35	1,330	0.31	54	0.75	115/60/1	OP	1725	1	13.8

*NEC FLA - Based on table 430.250 or 430.248 of National Electrical Code 2017. Actual motor FLA may vary for sizing thermal overload, consult factory"

APP BAY EXH : SELECTED OPTIONS AND ACCESSORIES

UL Listing
Airflow Direction: Exhaust
Motor Access: From Int. of Bldg.
Switch, NEMA-1, Toggle, Shipped with Unit
Aluminum Damper Guard

DATE: 7.18.22 ISSUE: FOR BID

SEAL:

SENDLEWSKI ARCHITECTS PC
ARCHITECTS - PLANNERS
215 ROANOKE AVENUE
RIVERHEAD, NY 11901
(631) 727-5352
9 SELENA COURT
WALDEN, NY 12586
(845) 275-8859

TAPPAN FIRE DISTRICT
123 WASHINGTON STREET
TAPPAN NY, 10983

MECHANICAL EQUIPMENT SCHEDULES & REFRIGERANT RISER DIAGRAM

PROJECT #: 21-08

DRAWN BY:

CAD FILE: 21-08/P:/BID

DRAWING#: M-7