

## DUCTLESS AIR CONDITIONING EQUIPMENT SCHEDULE (WALL MOUNT)

MARK NO.	BASE BID/ALTERNATE	NOMINAL FAN CFM	COOLING CAPACITY					MANUFACTURER (OR APPROVED EQUAL)	INDOOR UNIT DATA				OUTDOOR UNIT DATA					NOTES		
			SENS. CAP. MBH	TOTAL CAP. MBH	COND. E.A.T.	EVAP. E.W.B. TEMP	MIN. SEER		VOLTAGE	MODEL NO.	FAN MOTOR FLA	MCA	UNIT WEIGHT (LBS.)	VOLTAGE	MODEL NO.	FAN MOTOR FLA	MCA		MOCP	UNIT WEIGHT (LBS.)
DA1	BASE BID	425	12.2	18.0	95	80/67	18.5	DAI	208/230-1-60	PKA-A18HA7	0.33	1	29	208/230-1-60	PUY-A18NKA7	0.5	11	28	99	SEE BELOW

① UNIT TO INCLUDE A WALL MOUNTED 7-DAY PROGRAMMABLE AUTOMATIC CHANGEOVER THERMOSTAT WITH SUB-BASE AND LOCKING COVER. THERMOSTAT SHALL BE FACTORY MA REMOTE CONTROLLER MODEL PAR-40MAAU.  
 ② INDOOR UNIT TO BE WALL MOUNTED WITH FACTORY CONDENSATE PUMP AND SHALL INCLUDE LINE SET/CONDENSATE PUMP ENCLOSURE KIT (CONDENSATE PUMP APPROVED EQUALS: LITTLE GIANT EC-1K AND ASPEN/AIRTEC MINI AND MAXI LINE).  
 ③ INDOOR UNIT TO RECEIVE POWER FROM OUTDOOR UNITS THROUGH FIELD-SUPPLIED INTERCONNECTED WIRING.  
 ④ UNIT TO INCLUDE LOW AMBIENT CONTROLS TO 0°F.  
 ⑤ REFRIGERANT R-410A.  
 ⑥ UNIT SHALL BE ASHRAE 90.1-2013 COMPLIANT.  
 ⑦ SEE VRF REFRIGERANT PIPING NOTES FOR ADDITIONAL INFORMATION.

APPROVED EQUALS: TRANE MITSUBISHI, LG, AND JOHNSON CONTROLS (YORK)

## VRF OUTDOOR EQUIPMENT SCHEDULE

MARK NO.	BASE BID/ALTERNATE	MODEL NO. DATA		CAPACITY				ELECTRICAL			NET WEIGHT (LBS.)	NOTES	
		MANUFACTURER (OR APPROVED EQUAL)	MODEL NO.	AHRI EER	AHRI IEER	AHRI COP	COOLING MBH	HEATING MBH	VOLTAGE	MCA			MAX FUSE (A)
HRU 1	BASE BID	MITSUBISHI	PURY-P72	13.5	23.1	3.65	72	80	208/230-3-60	24	35	444	SEE BELOW
HRU 1	ALTERNATE #1	MITSUBISHI	PURY-P120	11.7	18.6	3.45	120	135	208/230-3-60	45	50	715	SEE BELOW
HRU 2	BASE BID	MITSUBISHI	PURY-P120	11.7	18.6	3.45	120	135	208/230-3-60	45	50	715	SEE BELOW
HRU 3	ALTERNATE #1	MITSUBISHI	PURY-P120	11.7	18.6	3.45	120	135	208/230-3-60	45	50	715	SEE BELOW

① R-410A REFRIGERANT, VARIABLE REFRIGERANT VOLUME, HEAT RECOVERY.  
 ② UNIT TO INCLUDE CONDENSER HAIL GUARD AND LOW AMBIENT CONTROLS TO 0°F.  
 ③ SYSTEM SHALL INCLUDE ONE BUILDING MASTER CONTROLLER. REFERENCE PLANS FOR LOCATION. BUILDING MASTER CONTROLLER SHALL BE TOUCHSCREEN AE-200A WITH INTEGRAL BAGNET GATEWAY FOR INTEGRATION TO BUILDING AUTOMATION SYSTEM.  
 ④ SYSTEM SHALL INCLUDE ONE HVAC MAINTENANCE TOOL AND SOFTWARE ON PORTABLE DRIVE WHICH SHALL BE STORED IN CONTROL PANEL ENCLOSURE. CONTRACTOR SHALL DEMONSTRATE/TEST UNITS UTILIZING MAINTENANCE TOOL WITH ENGINEER AND COMMISSIONING AGENT.  
 ⑤ MITSUBISHI CONTROL DRAWINGS WITH M-NET ADDRESSES LABELED SHALL BE LAMINATED AND INSTALLED AT MITSUBISHI CONTROL PANEL. DRAWINGS SHALL INCLUDE M-NET ADDRESS, UNIT MARK NUMBER, REFRIGERANT LINE LENGTHS, AND REFRIGERANT CHARGE (R-410A).  
 ⑥ WITHIN THE BUILDING MASTER CONTROLLER, UNITS SHALL BE LABELED WITH UNIT MARK NUMBER TO MATCH PLANS AND ROOM NAME/ROOM NUMBER.  
 ⑦ CONTRACTOR SHALL COMPLETE THE STARTUP DOCUMENTATION AS PER THE MANUFACTURER'S INSTRUCTIONS TO CERTIFY THE SYSTEM FOR THE EXTENDED 10-YEAR PARTS AND 10-YEAR COMPRESSOR WARRANTIES.  
 ⑧ ALL UNITS SHALL BE INSTALLED ON DIVERSITECH QUICKSLING NEXT GENERATION SUPER STAND VRF EQUIPMENT STAND. EQUIPMENT STAND FRAME SHALL BE SECURELY ANCHORED TO CONCRETE PAD IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION, WIND LOAD REQUIREMENTS, AND AS PER PLANS/SPECIFICATIONS.  
 ⑨ ALL UNITS SHALL BE ASHRAE 90.1-2013 COMPLIANT.

APPROVED EQUALS: TRANE MITSUBISHI, LG, AND JOHNSON CONTROLS (YORK)

## VRF BRANCH CONTROLLER SCHEDULE

MARK NO.	BASE BID/ALTERNATE	MANUFACTURER (OR APPROVED EQUAL)	MODEL NUMBER	BRANCHES	VOLTAGE	MCA	MAXIMUM FUSE AMPS	ASSOCIATED OUTDOOR UNIT	NOTES
BC 1	BASE BID	MITSUBISHI	CMB-P108NU-JA1	8	208/230-1-60	0.83/0.97	15	HRU-1	SEE BELOW
BC 2	BASE BID	MITSUBISHI	CMB-P108NU-G	8	208/230-1-60	0.52/0.47	15	HRU-2	SEE BELOW
BC 3	ALTERNATE #1	MITSUBISHI	CMB-P108NU-G	8	208/230-1-60	0.52/0.47	15	HRU-3	SEE BELOW

① BRANCH CONTROLLER TO INCLUDE FACTORY CONDENSATE PUMP.  
 ② FURNISH AND INSTALL FACTORY BALL VALVES ON ALL PORTS OF BRANCH CONTROLLER.  
 ③ LABEL PORTS OF BRANCH CONTROLLER WITH MARK NUMBER TO MATCH CONNECTED UNIT.

APPROVED EQUALS: TRANE MITSUBISHI, LG, AND JOHNSON CONTROLS (YORK)

## VRF REFRIGERANT PIPING NOTES

- ① ADDITIONAL REFRIGERANT CHARGE IS REQUIRED DEPENDING ON THE SIZE AND LENGTH OF EXTENDED PIPING. COORDINATE WITH EQUIPMENT MANUFACTURER.
- ② CONTRACTOR'S VENDOR SHALL PROVIDE REFRIGERANT LINE FINAL SIZES, LENGTHS, ETC. PER MANUFACTURER'S RECOMMENDATION. SUBMITTAL DRAWINGS SHALL INCLUDE CONTROLS, LINE SIZES, ETC. CONTRACTOR SHALL COORDINATE SIZES SHOWN ON PLANS WITH ACTUAL EQUIPMENT QUOTED PRIOR TO BIDDING.
- ③ FURNISH AND INSTALL FACTORY PRE-INSULATED REFRIGERANT LINE SETS.
- ④ FURNISH AND INSTALL FACTORY BALL VALVES ON ALL PORTS OF BRANCH CONTROLLER.
- ⑤ REFRIGERANT PIPING SHALL BE LABELED TO MATCH ASSOCIATED INDOOR AND OUTDOOR UNIT.
- ⑥ ALL EXPOSED INTERIOR REFRIGERANT PIPING SHALL BE ROUTED IN SCHEDULE 40 PVC. PRIME AND PAINT TO MATCH ADJACENT SURFACES. VERIFY PAINT COLOR WITH ARCHITECT.
- ⑦ USE INSULATED REFRIGERANT PIPING CLAMPS WHERE REFRIGERANT PIPING IS INSULATED.

## VRF OUTSIDE AIR EQUIPMENT SCHEDULE (DOAS)

MARK NO.	BASE BID/ALTERNATE	NOMINAL FAN CFM	OSA	COOLING CAPACITY			HEATING CAPACITY		MODEL NO. DATA			ELECTRICAL			ASSOCIATED OUTDOOR UNIT	NOTES
				TOTAL CAPACITY MBH	CONDENSER E.A.T.	EVAPORATOR E.W.B. TEMP	TOTAL CAPACITY MBH	REHEAT MBH	MANUFACTURER (OR APPROVED EQUAL)	MODEL NO.	VOLTAGE	MCA	MOCP			
OSA 1	BASE BID	1,200	1,200	112.0	95	80/67	61.4	24.2	MITSUBISHI	REFY-A1200CFM	208/230-1-60	3.99/4.31	15	HRU-2	SEE BELOW	
OSA 2	ALTERNATE #1	1,200	1,200	112.0	95	80/67	61.4	4.2	MITSUBISHI	REFY-A1200CFMR	208/230-1-60	3.99/4.31	15	HRU-3	SEE BELOW	
TOTAL				2,400	224.0		122.8									

① ALL UNITS TO INCLUDE INTERNAL FACTORY CONDENSATE PUMP.  
 ② ALL UNITS TO INCLUDE WALL MOUNTED SMART ME CONTROLLER AND WALL MOUNTED REMOTE TEMPERATURE SENSOR.  
 ③ REFRIGERANT R-410A.  
 ④ EXTERNAL STATIC SHALL BE 0.80"/0.96".  
 ⑤ ALL UNITS TO INCLUDE FACTORY FILTER BOX WITH 2" MERV 13 FILTER.  
 ⑥ ALL UNITS TO INCLUDE FACTORY RELAY KIT.  
 ⑦ ALL UNITS TO INCLUDE TWO (2) FACTORY DX COILS.

APPROVED EQUALS: TRANE MITSUBISHI, LG, AND JOHNSON CONTROLS (YORK)

## VRF INDOOR EQUIPMENT SCHEDULE (FAN COIL)

MARK NO.	BASE BID/ALTERNATE	NOMINAL FAN CFM	OSA	COOLING CAPACITY			HEATING CAPACITY	MODEL NO. DATA		ELECTRICAL			ASSOCIATED OUTDOOR UNIT	NOTES
				TOTAL CAPACITY (MBH)	CONDENSER E.A.T.	EVAPORATOR E.W.B. TEMP.	HIGH TEMP 47° E.A.T. (MBH)	MANUFACTURER (OR APPROVED EQUAL)	MODEL NO.	VOLTAGE	MCA	MOCP		
FC 1	BASE BID	1,400	400	48.0	95	80/67	54.0	MITSUBISHI	PVFY-P48	208/230-1-60	5.63	15	HRU-1 (BASE BID)	SEE BELOW
FC 2	BASE BID	735	100	24.0	95	80/67	27.0	MITSUBISHI	PVFY-P24	208/230-1-60	3.00	15	HRU-1 (BASE BID)	SEE BELOW
FC 3	ALTERNATE #1	735	255	24.0	95	80/67	27.0	MITSUBISHI	PVFY-P24	208/230-1-60	3.00	15	HRU-1 (ALT. #1)	SEE BELOW
FC 4	ALTERNATE #1	735	255	24.0	95	80/67	27.0	MITSUBISHI	PVFY-P24	208/230-1-60	3.00	15	HRU-1 (ALT. #1)	SEE BELOW
TOTAL				1,010	120.0		135.0							

① ALL UNITS TO INCLUDE INTERNAL FACTORY CONDENSATE PUMP.  
 ② ALL UNITS TO INCLUDE WALL MOUNTED SMART ME CONTROLLER AND WALL MOUNTED REMOTE TEMPERATURE SENSOR.  
 ③ REFRIGERANT R-410A.  
 ④ EXTERNAL STATIC SHALL BE 0.8"  
 ⑤ ALL UNITS TO INCLUDE FILTER BOX WITH MERV 13 FILTERS.

APPROVED EQUALS: TRANE MITSUBISHI, LG, AND JOHNSON CONTROLS (YORK)

## ELECTRIC UNIT HEATER SCHEDULE

MARK NO.	BASE BID/ALTERNATE	ELEMENT STAGES	ELECTRICAL DATA					AIR DELIVERY DATA			FAN MOTOR DATA			MAX MOUNTING HEIGHT	AIR THROW	UNIT WEIGHT (LBS.)	MANUFACTURER (OR APPROVED EQUAL)	UNIT MODEL NO.	NOTES	
			VOLTS	PHASE	K.W.	BTU/HR (000)	AMPS	CONTROL VOLTS	CFM	FPM	TEMP CHANGE (°F)	VOLTS	RPM							H.P.
EUH 1	BASE BID	1	208	1	3.0	10.2	14.5	208	350	800	27	208	1,600	1/100	8'-0"	12'-0"	24	BERKO	HUHA320	SEE BELOW

① UNIT TO INCLUDE A WALL MOUNTED 7-DAY PROGRAMMABLE AUTOMATIC CHANGEOVER THERMOSTAT WITH SUB-BASE AND LOCKING METAL GYM GUARD.  
 ② UNIT TO INCLUDE AUTOMATIC THERMAL CUTOFF.  
 ③ UNIT TO INCLUDE BERKO RADIAL DIFFUSER.  
 ④ UNIT TO INCLUDE FACTORY MOUNTING BRACKETS, ANCHORS, ETC. TO BE SECURELY ANCHORED IN ACCORDANCE TO MANUFACTURER'S RECOMMENDATION AND AS PER PLANS/SPECIFICATIONS. COORDINATE UNIT CLEARANCES WITH STRUCTURAL AND ARCHITECTURAL PLANS, FRAMING, ETC.

APPROVED EQUALS: MARKEL, MODINE, QMARK, AND REZTOR.

# HVAC SCHEDULES

**WHORTON ENGINEERING, INC.**  
HVAC - PLUMBING - PROCESS CONTROL

*Randee Whorton*  
RANDALL WHORTON, P.E.  
PHONE: (256) 820-9897

DATE: 01-20-2021  
25 SUMMERALL GATE ROAD  
ANNISTON, ALABAMA 36205

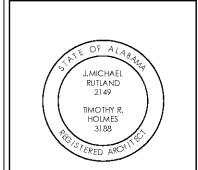


WHORTON ENGINEERING PROJECT NO. 19212



Facilities Management  
1161 West Samford Avenue  
Auburn University, AL 36849  
Phone: (334) 844-4810  
Fax: (334) 844-9458  
Safety is our first priority.  
Think Safety. Act Safely.

No.	Revision	Date



**JMR+H**  
Architecture, PC  
440 Dexter Avenue  
Montgomery, AL 36104  
Phone: (334) 202-5672  
Fax: (334) 202-5692  
JMR+H Project Number: 19-968  
Drawn By: DT

Auburn University Building  
Ham Wilson Arena Renovations  
Project Number 19-451

SHEET TITLE:  
HVAC SCHEDULES

DRAWN BY:  
JH  
CHECKED BY:  
RDW  
DATE:  
JANUARY 21, 2021  
FILE NUMBER:

PROJECT NUMBER:  
19-451  
SHEET NUMBER:

# M1.2