

GENERAL NOTES

- CONTRACTOR IS ADVISED TO VISIT AND SURVEY THE PLACE OF INSTALLATION.
- ALL AIR CONDITIONING UNITS TO BE SUPPLIED SHALL BE NEW AND APPROVED PRODUCTS OF REPUTABLE MANUFACTURERS.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE CLOSELY HIS WORK WITH THE OTHER TRADES CONCERNED.
- REFRIGERANT SUCTION LINES SHALL BE INSULATED WITH 25mm THICK PREMOULDED ELASTOMERIC RUBBER INSULATION
- INDIVIDUAL WEATHER PROOF TYPE CIRCUIT BREAKER SHALL BE PROVIDED FOR ALL CONDENSING UNITS.
- BORING OF HOLES THRU FLOORS, SLABS, ETC. SHALL BE DONE BY THIS CONTRACTOR INCLUDING RETOUCHING AND WATER PROOFING OF SAME.
- ALL DRAIN LINES SHALL BE PROVIDED WITH INSULATION TYPICAL TO REFRIGERANT PIPING. (REFER TO PIPE INSULATION DETAIL.)
- ALL NECESSARY GOVERNMENT PERMITS SHALL BE SECURED AND FOR ACCOUNT OF THE CONTRACTOR.
- AS-BUILT PLANS SHALL BE PROVIDED BY THIS CONTRACTOR AFTER COMPLETION OF WORKS.
- ALL INSTALLATION WORKS SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.
- ALL REFRIGERANT SUCTION LINES EXPOSED INDOORS AND/OR EXPOSED TO WEATHER SHOULD BE PROVIDED WITH GAUGE #24 ALUMINUM CLADDING. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)
- ALL ACCU'S AND FCU'S SHALL BE PROVIDED WITH ANGULAR BAR SUPPORTS. (SUBMIT SHOP DRAWING PRIOR TO INSTALLATION)

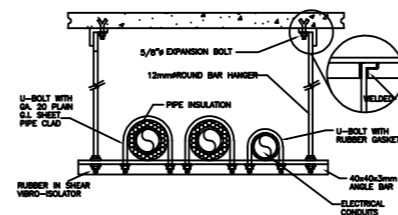
SPECIFICATIONS

- REFRIGERANT PIPES :
 - TYPE : TYPE "L" COPPER TUBE
 - INSULATION : 25 mm. THK.
 - FINISH : USE ELASTOMERIC PIPE INSULATION AND WITH PROPER VAPOR BARRIER P.E. TAPE AND METAL CLADDING FOR INSIDE & OUTSIDE (EXPOSED) PIPING
- METAL CLADDING : PROVIDE GA. 24 ALUMINUM CLADDING FOR EXPOSE INDOORS AND OUTDOORS
- ALL REFRIGERANT SHALL BE SIZE ACCORDING TO MANUFACTURERS REQUIREMENT.
- DRAIN PIPES :
 - MATERIAL : 50mmØ PVC PIPES SERIES 1000
 - ALL EXPOSED DRAIN PIPES SHALL BE PROPERLY INSULATED. INSULATION SAME AS REFRIGERANT SUCTION LINE
- ELECTRICAL :
 - PROVIDE CIRCUIT BREAKER POWER WIRING & CONTROLLER FROM THE POWER SOURCE TO THE UNITS.
 - PROVIDE CONTROL WIRING FROM THE UNIT TO THE THERMOSTAT.
 - CONDUIT : INTERMEDIATE METALIC CONDUIT (IMC)
 - WIRE : THHN CONDUIT AND WIRE SIZE : AS PER MANUFACTURER'S RECOMMENDATION.

NOTES:

- ALL REFRIGERANT SUCTION AND LIQUID LINES SIZES FOR THE SPLIT PACKAGED AIR CONDITIONERS TO FOLLOW EQUIPMENT MANUFACTURER'S RECOMMENDATIONS
- PROVISION OF ALL REFRIGERANT PIPE SLEEVES (100 MMØ BI PIPES) PASSING THRU BEAMS, WALLS AND FLOOR SLABS SHALL BE WATERPROOF AND DONE BY THE AIRCON CONTRACTOR

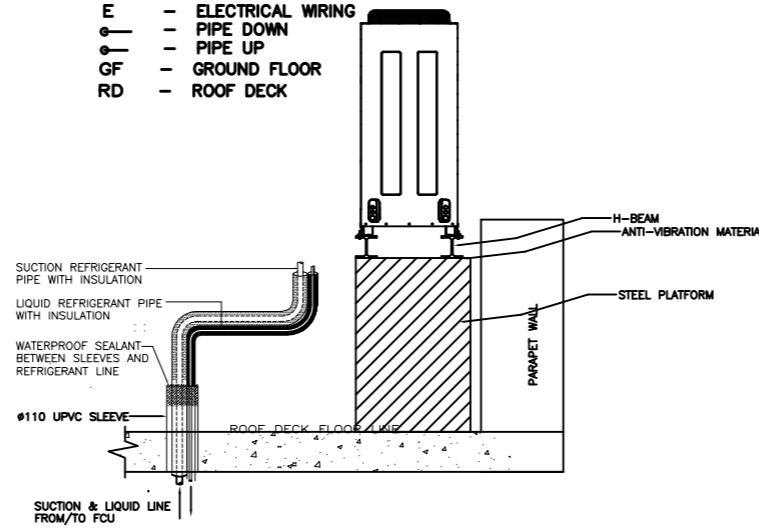
PIPE SIZES INCL. INSULATION (mm)	FLAT BARS (mm)	ROUND BAR (mm)	EXPANSION BOLT (mm)	SPACING OF HANGERS O.C.
25 TO 50Ø	25 X 3	10	10	1.5m
65 TO 100Ø	40 X 3	12	12	1.5m
125 TO 150Ø	50 X 6	16	16	1.2m



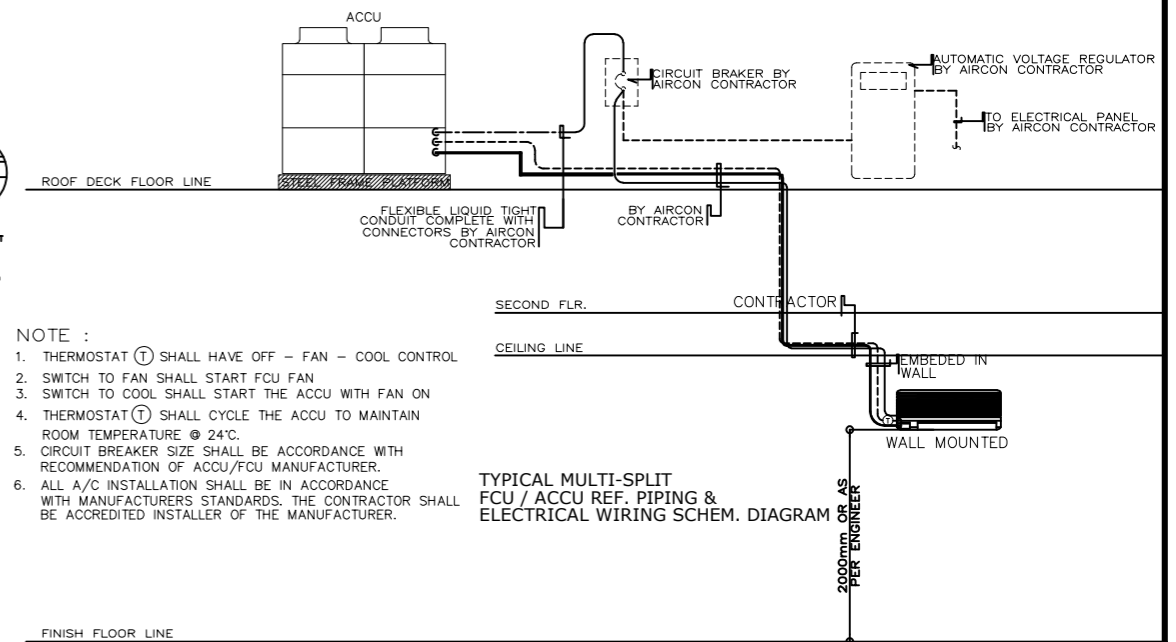
PIPE HANGER DETAIL

LEGEND

- ACCU - AIR COOLED CONDENSING UNIT
- FCU - FAN COIL UNIT
- CEF - CEILING MOUNTED EXH. FAN
- TR - TONS OF REFRIGERATION
- CFM - CUBIC FEET PER MINUTE
- EP - ELECTRICAL PANEL
- ⊕ - THERMOSTAT
- ⊖ - CIRCUIT BREAKER
- ⊗ - MOTOR STARTER
- R - REFRIGERANT PIPE
- D - DRAIN LINE
- E - ELECTRICAL WIRING
- ⊥ - PIPE DOWN
- ⊕ - PIPE UP
- GF - GROUND FLOOR
- RD - ROOF DECK



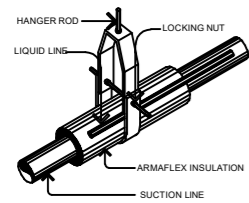
CONDENSING UNIT INSTALLATION DETAIL



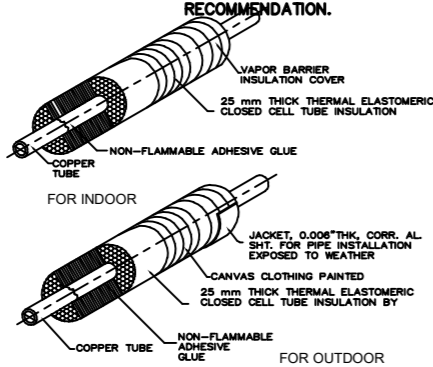
NOTE :

- THERMOSTAT ⊕ SHALL HAVE OFF - FAN - COOL CONTROL
- SWITCH TO FAN SHALL START FCU FAN
- SWITCH TO COOL SHALL START THE ACCU WITH FAN ON
- THERMOSTAT ⊖ SHALL CYCLE THE ACCU TO MAINTAIN ROOM TEMPERATURE @ 24°C.
- CIRCUIT BREAKER SIZE SHALL BE ACCORDANCE WITH RECOMMENDATION OF ACCU/FCU MANUFACTURER.
- ALL A/C INSTALLATION SHALL BE IN ACCORDANCE WITH MANUFACTURERS STANDARDS. THE CONTRACTOR SHALL BE ACCREDITED INSTALLER OF THE MANUFACTURER.

TYPICAL MULTI-SPLIT FCU / ACCU REF. PIPING & ELECTRICAL WIRING SCHEM. DIAGRAM

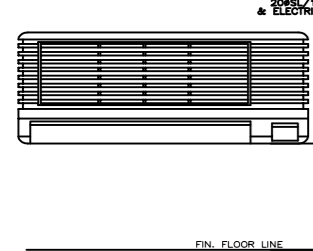


PIPE HANGER DETAIL

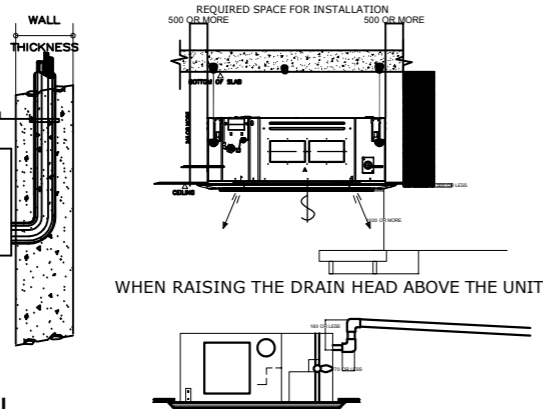


PIPE INSULATION DETAIL (FOR REFRIGERANT PIPES)

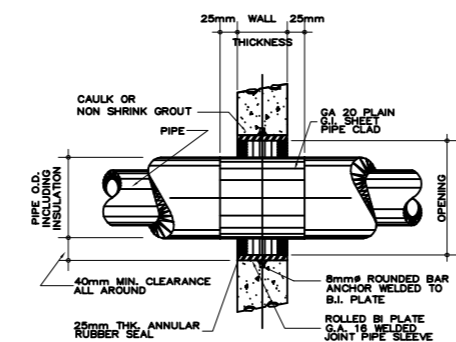
- FEATURES
- MICROPROCESSOR-CONTROLLED TEMPERATURE
 - VARIABLE FAN SPEED.



WALL MOUNTED FCU (INDOOR UNIT)



CIELING CASSETTE FREE BLOW



TYP. PIPE THRU WALL DETAIL

SERVICE UNIT					
ACU	QTY	TR	BTU/HR minimum	PHASE	VOLTS
NO.					
SERVICE	6	5	60,000	3	230

EQUIPMENT SCHEDULE - FAN COIL UNIT - BUILDING 2

FCU NO.	QTY	TR	BTU/HR minimum	PHASE	VOLTS
FC-GF-A1	1	1.5	18,000	1	230
FC-GF-A2	1	2	24,000	1	230
FC-GF-A3-6	4	2.5	30,000	1	230
FC-GF-B1-7	7	2.5	30,000	1	230
FC-GF-D1-6	6	2.5	30,000	1	230
FC-GF-E1-5	5	2.5	30,000	1	230

EQUIPMENT SCHEDULE - ACCU - BUILDING 2

SYSTEM NO.	QTY	TR	BTU/HR minimum	PHASE	VOLTS
SYSTEM A	1	13.5	162,000	3	230
SYSTEM B	1	17.5	210,000	3	230
SYSTEM D	1	15	180,000	3	230
SYSTEM E	1	12.5	150,000	3	230



REPUBLIC OF THE PHILIPPINES
Department of Budget and Management
GENERAL SOLANO STREET, SAN MIGUEL, Manila

Project Title:
Supply, Delivery, Fabrication,
Testing and Commissioning of
Air-conditioning system at the
DBM Central Office