



DUCTWORK NOTES:

- 1 ALL DUCT WORK TO BE MANUFACTURED TO S.A.N.S 1238/05 STANDARDS, WITH FLANGED JOINTS ON DUCTS EXCEEDING 400 SEM PERIMETER OR ONE SIDE EXCEEDS 750 AND S&G JOINTS ON SMALLER DUCTS.
- 2 ALL AC DUCTING TO BE EXTERNALLY INSULATED WITH 25mm FOIL FACED FIBREGLASS INSULATION.
- 3 ALL VENTILATION DUCTING TO BE UNINSULATED.
- 4 EXTRACT & SUPPLY DUCTING FROM ENERGY WHEEL IS INSULATED.
- 5 ALL FLEXIBLE DUCTING TO BE FACTORY PRE-INSULATED. ALL FLEXIBLE DUCTING TO BE FIXED TO SPIGOTS WITH JUBILEE CLAMPS AND STRAPPED WITH DUCT TAPE.
- 6 ALL HANGERS AND BRACKETS TO BE GALVANISED.
- 7 ALL DUCTWORK TO BE HUNG ON 30x50x1.6 G.S.M CHANNEL TRAPEZE HANGERS WITH 8# RODS.
- 8 FLEXIBLE CONNECTIONS TO BE FITTED TO ALL DUCTING BETWEEN AIRHANDLING AND PACKAGE UNITS, FANS, ETC.

DUCT SPLITTERS	DUCT WIDTH (W) IN MM	81	82	83
SUPPLY AIR ONLY	300 TO 600	350		
	601 TO 900	300	555	
	901 TO 1200	250	450	750
	1201 TO 2400	300	550	950

CHILLED WATER PIPING NOTES:

- 1 ALL PIPE WORK AND FITTINGS SHALL BE INSTALLED AS PER THE SPECIFICATION.
- 2 ALL PIPING SHALL BE S.A.B.S 62 & 719 MEDIUM BLACK.
- 3 PIPE SIZES #15 TO #65 - S.A.B.S 62 MED BLACK SCREWED ENDS TO 60-67 (6021) THREAD.
- 4 SIZE #80 TO #150 - S.A.B.S 62 MED BLACK BUTT WELDED.
- 5 SIZE #200 UPWARD - S.A.B.S 719 MED BLACK BUTT WELDED.
- 6 ALL CHILLED WATER FITTINGS:
 - 6.1 #15 TO #65 - SCREWED MALLEABLE CAST IRON
 - 6.2 #80 UPWARDS - BUTT WELD TO ANSI B16.9
- 7 ALL PIPE FLANGES UP TO 150# TO BE TABLE -D.
- 8 CHILLED WATER PIPE GASKETS:
 - 8.1 FOR SCREWED PIPING USE THREAD SEAL (PTFE) 8.2 FOR FLANGES USE RUBBER INSERTION.
- 9 ALL FLANGE NUTS & BOLTS TO BE TO ASTM A193.

VALVES:

- 1 ALL ISOLATING VALVES TO BE AS FOLLOWS:
 - 2 #15 TO #65 - BALL VALVE SCREWED BSP ENDS.
 - 3 #80 TO #150 - LONG STEM BUTTERFLY VALVES.

PIPE INSULATION:

- 1 ALL CHILLED WATER PIPING TO BE INSULATED AS PER THE SPECIFICATION.

LEGEND

- [Symbol] FIRE SIGNAL TO PANEL IN PLANTROOMS BY OTHERS
- [Symbol] 240V POWER 5 AMP SUPPLY AND ISOLATOR IN CEILING VOID FOR AC UNIT BY AIRVENT
- [Symbol] 400V POWER SUPPLY & ISOLATOR TO PANEL BY OTHERS - TO UNIT BY AIRVENT
- [Symbol] 50# RIGID WALL BOX POSITIONED NEXT TO LIGHT SWITCH BY AIRVENT. OR CONDUIT TO BE CHASED IN WALL TO ABOVE CEILING BY AIRVENT
- [Symbol] MINORAL UNIT REMOTE
- [Symbol] TRAPPED DRAIN POINT IN CEILING VOID WITHIN 0.5m FROM UNIT
- [Symbol] DOOR GRILLE, SUPPLIED BY TENNEN AIR AND FITTED BY OTHERS
- [Symbol] DOOR TO BE UNDERCUT BY 25mm BY OTHERS
- [Symbol] S UNIT AVERAGING SENSOR - BY AIRVENT

Unit Schedule

Reference	Make	Model	Type	Power	Air Volume	Capacity	Qty
AHU 3.1	FUJAIRE SA	FMA 0510	Chilled Water Air Handling Unit	3 Phase	1517 l/s	22.59 Kw	1
AHU 3.2	FUJAIRE SA	FMA 0809	Chilled Water Air Handling Unit	3 Phase	2129 l/s	32.61 Kw	1
AHU 3.3	FUJAIRE SA	FMA 0407	Chilled Water Air Handling Unit	3 Phase	924 l/s	15.00 Kw	1
AHU 3.4	FUJAIRE SA	FMA 0407	Chilled Water Air Handling Unit	3 Phase	729 l/s	37.95 Kw	1
AHU 3.5	FUJAIRE SA	FMA 0410	Chilled Water Air Handling Unit	3 Phase	1424 l/s	46.09 Kw	1

EQUIPMENT SCHEDULE

Reference	Make	Model	Type	Size	Air Flow	Colour	Connection	Qty
RAG 3.1-1	Rickard	ECA	Eggrate Return Air Grille - Aluminium	595x595	Varies	White	595x595 Vertical	19
RAG 3.1-2	Rickard	ECA	Eggrate Return Air Grille - Aluminium	595x595	Varies	White	595x595 Drop In	11
RAG 3.1-3	Rickard	EGA 45	Single Deflection Return Air Grille	800x300	Varies	White		4
SAD 3.1-1	Rickard	CCD	Constant Volume Diffuser	3000	180	White	595x595 Drop In	1
SAD 3.1-2	Rickard	CCD	Constant Volume Diffuser	2500	150	White	c/v Electric Reheat 1.5Kw	1
SAD 3.1-3	Rickard	CRD	Constant Volume Diffuser	3000	250	White	c/v Electric Reheat 2.0 Kw	2
SAD 3.1-4	Rickard	CRD	Constant Volume Diffuser	2500	120	White	c/v Electric Reheat 1.5Kw	2
SAD 3.1-5	Rickard	CRD	Constant Volume Diffuser - Round	2500	100	White	Round	1
SAD 3.1-6	Rickard	CRD	Constant Volume Diffuser	3000	185	White	c/v Electric Reheat 2.0 Kw	2
SAD 3.1-7	Rickard	CCD	Constant Volume Diffuser	3000	200	White	595x595 Drop In	2
SAD 3.2-1	Rickard	CRD	Constant Volume Diffuser - Round	2000	100	White	Round	5
SAD 3.2-2	Rickard	CRD	Constant Volume Diffuser	2500	100	White	c/v Electric Reheat 1.5Kw	3
SAD 3.2-3	Rickard	CRD	Constant Volume Diffuser	2000	85	White	c/v Electric Reheat 1.25Kw	4
SAD 3.2-4	Rickard	CCD	Constant Volume Diffuser	2500	100	White	c/v Electric Reheat 1.5Kw	4
SAD 3.2-5	Rickard	CCD	Constant Volume Diffuser	2500	150	White	c/v Electric Reheat 1.5Kw	4
SAD 3.2-9	Rickard	CRD	Constant Volume Diffuser - Round	2000	100	White	Round	1
SAD 3.3-1	Rickard	CCD	Constant Volume Diffuser	2500	95	White	595x595 Drop In	1
SAD 3.3-2	Rickard	CRD	Constant Volume Diffuser - Round	2500	155	White	Round	1
SAD 3.3-3	Rickard	CCD	Constant Volume Diffuser	2000	50	White	595x595 Drop In	1
SAD 3.3-4	Rickard	CRD	Constant Volume Diffuser - Round	3000	155	White	Round	1
SAD 3.4-1	Rickard	CCD	Constant Volume Diffuser	2500	135	White	595x595 Drop In	6
SAD 3.5-1	Rickard	CRD	Constant Volume Diffuser - Round	2500	145	White	Round	3
SAD 3.5-2	Rickard	CCD	Constant Volume Diffuser	2500	115	White	595x595 Drop In	1
SAD 3.5-3	Rickard	CCD	Constant Volume Diffuser	2500	145	White	595x595 Drop In	7
SAG 3.2-1	AAP	DD+OBD	Supply Air Grille - Double Deflection + OBD	800x300	155	TBA	Opening Size	2
SAG 3.3-1	AAP	DD+OBD	Supply Air Grille - Double Deflection + OBD	800x300	180	TBA	Opening Size	2
WL3.2	AAP	WL	Weather Louve	4500x1450	-	PD9089	Opening Size	1

Damper Schedule

Reference	Make	Model	Size	Size	Qty
DA1	AAP	ECD	Balancing Damper	1050x450	2
DA2	AAP	ECD	Balancing Damper	750x500	1
DA3	AAP	ECD-R	Balancing Damper	2000	12
DA4	AAP	ECD-R	Balancing Damper	2500	33
DA5	AAP	ECD-R	Balancing Damper	3000	8
FD1	AAP	FD-R	Motorized Fire Damper	2100x650x600L	1