

PART C.0: JMP HVAC

DETAIL BILL OF QUANTITIES					
JMP HVAC - FRAMEWORK					
PRELIMINARIES TO THE BILL					
1	This Bill of Quantities forms part of the contract documents and is to be read in conjunction therewith.				
2	All works billed here shall include for the full scope of service specified including but not limited to supply, delivery, installation, commissioning, documentation, building tuning, project closeout and administrative requirements, and all works as necessary to provide a working product in accordance with the project performance criteria.				
3	Quantities indicated here are to be verified by the contractor against the project drawings. All discrepancies shall be brought to the attention of the responsible engineer. Should no queries be raised the contract totals and rates provided shall be deemed sufficient for the due execution of the works in accordance with the engineers intent communicated through the project drawings and these specifications.				
4	No variation in rates shall be due based on variation in quantities, rate of exchange or escalation.				
5	Errors and omissions of equipment or material required to execute the project solution specified or indicated on the drawings shall be brought to the attention of the responsible engineer for clarification, failing which the provision of such items shall be deemed included in the project rates.				
6	All works required to execute the scope of works in accordance with the project program and quality requirements are deemed included in the rates and totals provided below.				
7	Rates provided shall include for fixing, hangers, fittings, transformations, sealant and all other items required to deliver a functional system in accordance with the design intent and specifications. Rate includes the supply,delivery,labour and installation of equipment				
8	The bill of quantities shall not be used as the basis for material order.				
9	The values here shall be entered in South African Rands and exclusive of VAT.				
ITEM NO	DESCRIPTION	UNIT	QUAN-TITY	RATE	AMOUNT
1	BILL 1 - PRELIM & GENERAL				
1,1	P & Gs				
	1. SUB TOTAL : CARRIED FORWARD TO SUMMARY				
2	BILL 2 - GROUND FLOOR				
2,1	VRV Indoor units				
	Midwall indoor unit complete with all piping, supports, hangers etc				
	2,1kW Midwall indoor unit - single phase, 15amp, 21W.	No	4		
	Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	40		
	Condensate pipes, 32mm dia Upvc, class 16.	m	30		
	3,7kW Midwall indoor unit - single phase, 15amp, 21W.	No	4		
	Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
	Condensate pipes, 32mm dia Upvc, class 16.	m	30		
	2,6kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1		
	Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	40		
	Condensate pipes, 32mm dia Upvc, class 16.	m	30		
	2,9kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	2		
	Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
	Condensate pipes, 32mm dia Upvc, class 16.	m	60		

3,1kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	40		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
3,6kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
Condensate pipes, 32mm dia Upvc, class 16.	m	60		
4,5kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	40		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
6,3kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	7		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	210		
Condensate pipes, 32mm dia Upvc, class 16.	m	160		
4,1kW Hideaway indoor unit - single phase, 15amp, 270W.	No	7		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	210		
Condensate pipes, 32mm dia Upvc, class 16.	m	160		
5,6kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
7,1kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
8,6kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
10,5kW Hideaway indoor unit - single phase, 15amp, 800W.	No	3		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	150		
Condensate pipes, 32mm dia Upvc, class 16.	m	90		
10,9kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
15,6kW Hideaway indoor unit - single phase, 15amp, 800W.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
Condensate pipes, 32mm dia Upvc, class 16.	m	50		
15,8kW Hideaway indoor unit - single phase, 15amp, 800W.	No	3		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
Condensate pipes, 32mm dia Upvc, class 16.	m	50		
16,5kW Hideaway indoor unit - single phase, 20amp, 1,6kW.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
Condensate pipes, 32mm dia Upvc, class 16.	m	50		
22kW Hideaway indoor unit - single phase, 20amp, 1,6kW.	No	5		

Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
Condensate pipes, 32mm dia Upvc, class 16.	m	50		
28kW Hideaway indoor unit - single phase, 20amp, 1,6kW.	No	5		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	80		
Condensate pipes, 32mm dia Upvc, class 16.	m	50		
SHU11- Network room, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 250 to 400x 300 duct	No	1		
400 x 300 Duct	m	5		
400 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø200 Spigots	No	2		
Ø200 Round ducts	m	3		
Ø200 Supply flex ducts	m	4		
Ø200 Swirl type diffusers	No	2		
Ø200 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
600 x 600 RAG+OBD c/w 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHU11- Reception+foyer, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 250 to 400x 300 duct	No	1		
400 x 300 Duct	m	4		
400 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø300 Spigots	No	3		
Ø300 Round ducts	m	3		
Ø300 Supply flex ducts	m	5		
Ø300 Swirl type diffusers	No	3		
Ø300 Butterfly dampers	No	1		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
600 x 600 RAG+OBD c/w 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHU11- Reception, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 250 to 400x 300 duct	No	1		
Transformation, 400 x 300 to 300x 300 duct	No	1		
400 x 300 Duct	m	4		
300 x 300 Duct	m	4		
300 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	4		
Ø250 Round ducts	m	2		
Ø250 Supply flex ducts	m	6		
Ø250 Swirl type diffusers	No	4		
Ø250 Butterfly dampers	No	1		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
600 x 600 RAG+OBD c/w 400dia flex connection. with filter	No	1		

Wall mounted remote controller	No	1		
SHUI1- Reception+stair, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 250 to 400x 300 duct	No	1		
400 x 300 Duct	m	2		
400 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	2		
Ø250 Round ducts	m	1		
Ø250 Supply flex ducts	m	3		
Ø250 Swirl type diffusers	No	2		
Ø250 Butterfly dampers	No	1		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
600 x 600 RAG+OBD c/w 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI3- Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 250 to 400x 400 duct	No	1		
400 x 400 x 800L Plenum box	No	1		
Diffusers - 2nd Fix				
Ø200 Spigots	No	3		
Ø200 Round ducts	m	12		
Ø200 Supply flex ducts	m	4		
Ø200 Swirl type diffusers	No	3		
Ø200 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
600 x 600 RAG+OBD with filter	No	1		
Wall mounted remote controller	No	1		
SHUI5 - Canteen, Hide away units				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 600x 300 duct	No	1		
Transformation, 600 x 300 to 500x 300 duct	No	1		
Transformation, 500 x 300 to 300x 300 duct	No	1		
600 x 300 Duct	m	4		
500 x 300 Duct	m	6		
300 x 300 Duct	m	6		
300 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	12		
Ø250 Round ducts	m	24		
Ø250 Supply flex ducts	m	18		
Ø250 Swirl type diffusers	No	12		
Ø250 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	2		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	2		
Wall mounted remote controller	No	2		
SHUI5 - Meeting rooms, Hide away unit				

Ducted split unit complete with all piping, supports, hangers etc Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 600x 300 duct	No	1	
Transformation, 600 x 300 to 400x 300 duct	No	1	
600 x 300 Duct	m	7	
400 x 300 Duct	m	8	
400 x 300 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	7	
Ø250 Round ducts	m	23	
Ø250 Supply flex ducts	m	11	
Ø250 Swirl type diffusers	No	7	
Ø250 Butterfly dampers	No	3	
1200 x 700 x 400 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	
SHUI5 - Archive, Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 600x 300 duct	No	1	
Transformation, 600 x 400 to 500x 300 duct	No	1	
Transformation, 500 x 300 to 300x 300 duct	No	1	
600 x 300 Duct	m	2	
500 x 300 Duct	m	3	
300 x 300 Duct	m	2	
300 x 300 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	4	
Ø250 Round ducts	m	8	
Ø250 Supply flex ducts	m	6	
Ø250 Swirl type diffusers	No	4	
Ø250 Butterfly dampers	No	1	
1200 x 700 x 400 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	
SHUI5 - One stop shop, Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 500x 300 duct	No	1	
Transformation, 500 x 300 to 300x 300 duct	No	1	
500 x 300 Duct	m	5	
300 x 300 Duct	m	4	
300 x 300 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	4	
Ø250 Round ducts	m	8	
Ø250 Supply flex ducts	m	6	
Ø250 Swirl type diffusers	No	4	
Ø250 Butterfly dampers	No	2	
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	

SHUI5 - Bank, Hide away unit
 Ducted split unit complete with all piping, supports, hangers etc
 Ducts
 Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 500x 300 duct
 Transformation, 500 x 300 to 300x 300 duct

500 x 300 Duct
 300 x 300 Duct

300 x 300 Stop end plate

Diffusers - 2nd Fix

Ø250 Spigots
 Ø250 Round ducts
 Ø250 Supply flex ducts
 Ø250 Swirl type diffusers
 Ø250 Butterfly dampers

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.
 1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

Wall mounted remote controller

SHUI5 - Management office, Hide away units
 Ducted split unit complete with all piping, supports, hangers etc
 Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct
 Transformation, 600 x 300 to 500x 300 duct
 Transformation, 500 x 300 to 300x 300 duct

600 x 300 Duct
 500 x 300 Duct
 300 x 300 Duct

300 x 300 Stop end plate

Diffusers - 2nd Fix

Ø300 Spigots
 Ø300 Round ducts
 Ø300 Supply flex ducts
 Ø300 Swirl type diffusers
 Ø300 Butterfly dampers
 Ø250 Spigots
 Ø250 Round ducts
 Ø250 Supply flex ducts
 Ø250 Swirl type diffusers
 Ø250 Butterfly dampers

1200 x 700 x 400 Plenum box, Internally insulated by sonic liner.
 1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

Wall mounted remote controller

SHUI5 - Logistics Company 2, Hide away units
 Ducted split unit complete with all piping, supports, hangers etc
 Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct
 Transformation, 600 x 300 to 500x 300 duct
 Transformation, 500 x 300 to 300x 300 duct

600 x 300 Duct
 500 x 300 Duct
 300 x 300 Duct

600 x 300 Stop end plate
 300 x 300 Stop end plate

No	1
No	1
m	5
m	4
No	1
No	4
m	8
m	6
No	4
No	2
No	1
No	1
No	1
No	2
No	2
No	2
m	7
m	6
m	8
No	2
No	9
m	18
m	14
No	9
No	3
No	2
m	4
m	3
No	2
No	1
No	2
No	2
No	2
No	2
No	1
No	1
No	1
m	10
m	4
m	5
No	1
No	1

Diffusers - 2nd Fix		
Ø250 Spigots	No	13
Ø250 Round ducts	m	16
Ø250 Supply flex ducts	m	20
Ø250 Swirl type diffusers	No	13
Ø250 Butterfly dampers	No	5
1200 x 700 x 400 Plenum box, Internally insulated by sonic liner.	No	2
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	2
Wall mounted remote controller	No	2
SHUI5 - Logistics Company 1, Hide away units		
Ducted split unit complete with all piping, supports, hangers etc		
Ducts		
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.		
Transformation, 1200 x 400 to 600x 300 duct	No	4
Transformation, 600 x 300 to 500x 300 duct	No	4
Transformation, 500 x 300 to 300x 300 duct	No	4
600 x 300 Duct	m	12
500 x 300 Duct	m	12
300 x 300 Duct	m	16
300 x 300 Stop end plate	No	4
Diffusers - 2nd Fix		
Ø250 Spigots	No	25
Ø250 Round ducts	m	45
Ø250 Supply flex ducts	m	38
Ø250 Swirl type diffusers	No	25
Ø250 Butterfly dampers	No	5
1200 x 700 x 400 Plenum box, Internally insulated by sonic liner.	No	4
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	4
Wall mounted remote controller	No	4
SHUI5 - Mall reception, Hide away unit		
Ducted split unit complete with all piping, supports, hangers etc		
Ducts		
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.		
Transformation, 1200 x 400 to 400x 300 duct	No	1
Transformation, 400 x 300 to 300x 300 duct	No	1
400 x 300 Duct	m	3
300 x 300 Duct	m	6
300 x 300 Stop end plate	No	1
Diffusers - 2nd Fix		
Ø250 Spigots	No	3
Ø250 Round ducts	m	6
Ø250 Supply flex ducts	m	3
Ø250 Swirl type diffusers	No	3
Ø250 Butterfly dampers	No	1
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1
Wall mounted remote controller	No	1
SHUI5 - Atrium, Hide away units		
Ducted split unit complete with all piping, supports, hangers etc		
Ducts		
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.		
Transformation, 1200 x 400 to 600x 400 duct	No	6
600 x 400 x 300 Plenum box	No	6

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Diffusers - 2nd Fix			
TJN/400 Trox type-K, Jet Nozzles c/w swirl unit	No	24	
Ø468 Round ducts	m	6	
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	
BILL 3 - FIRST FLOOR			
2,6kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	40	
Condensate pipes, 32mm dia Upvc, class 16.	m	25	
2,7kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	4	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	198	
Condensate pipes, 32mm dia Upvc, class 16.	m	110	
3kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	2	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	82	
Condensate pipes, 32mm dia Upvc, class 16.	m	45	
3,6kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50	
Condensate pipes, 32mm dia Upvc, class 16.	m	35	
3,8kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	52	
Condensate pipes, 32mm dia Upvc, class 16.	m	39	
4kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	45	
Condensate pipes, 32mm dia Upvc, class 16.	m	32	
3,2kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	45	
Condensate pipes, 32mm dia Upvc, class 16.	m	30	
3,6kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	2	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	100	
Condensate pipes, 32mm dia Upvc, class 16.	m	50	
4,5kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50	
Condensate pipes, 32mm dia Upvc, class 16.	m	30	
7,1kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50	
Condensate pipes, 32mm dia Upvc, class 16.	m	30	
10,6kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50	
Condensate pipes, 32mm dia Upvc, class 16.	m	30	
3,6kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50	
Condensate pipes, 32mm dia Upvc, class 16.	m	30	
5,6kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50	
Condensate pipes, 32mm dia Upvc, class 16.	m	30	
7,1kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1	

Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
8,2kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
10,6kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
12,3kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
22,4kW Hideaway indoor unit - single phase, 20amp, 1,6kW.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
10,6kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
14,1kW Hideaway indoor unit - single phase, 20amp, 820W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
2,1kW Midwall indoor unit - single phase, 15amp, 21W.	No	11	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
2,3kW Midwall indoor unit - single phase, 15amp, 21W.	No	2	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	85 52	
2,5kW Midwall indoor unit - single phase, 15amp, 21W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	40 25	
2,7kW Midwall indoor unit - single phase, 15amp, 21W.	No	3	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	110 65	
3,2kW Midwall indoor unit - single phase, 15amp, 21W.	No	1	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	50 30	
3,6kW Midwall indoor unit - single phase, 15amp, 21W.	No	2	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	70 40	
12,5kW Midwall indoor unit - single phase, 15amp, 21W.	No	2	
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications. Condensate pipes, 32mm dia Upvc, class 16.	m m	60 30	
SHUI6 - Finance, Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			
supports and duct tape etc.			
Transformation, 1200 x 400 to 600x 300 duct	No	1	
Transformation, 600 x 300 to 300x 300 duct	No	1	
600 x 300 Duct	m	8	
300 x 300 Duct	m	4	

300 x 300 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	5	
Ø250 Round ducts	m	10	
Ø250 Supply flex ducts	m	8	
Ø250 Swirl type diffusers	No	5	
Ø250 Butterfly dampers	No	3	
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	
SHUI6 - Finance,Creditors Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 600x 300 duct	No	1	
Transformation, 600 x 300 to 300x 300 duct	No	1	
600 x 300 Duct	m	8	
300 x 300 Duct	m	5	
600 x 300, 90° Bend duct	No	1	
300 x 300 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	3	
Ø250 Round ducts	m	2	
Ø250 Supply flex ducts	m	5	
Ø250 Swirl type diffusers	No	3	
Ø250 Butterfly dampers	No	2	
Ø200 Spigots	No	2	
Ø200 Round ducts	m	3	
Ø200 Supply flex ducts	m	3	
Ø200 Swirl type diffusers	No	2	
Ø200 Butterfly dampers	No	1	
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	
SHUI4 - HR Office, Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 400x 300 duct	No	1	
Transformation, 400 x 300 to 300x 300 duct	No	1	
400 x 300 Duct	m	12	
300 x 300 Duct	m	4	
300 x 300 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	4	
Ø250 Round ducts	m	1	
Ø250 Supply flex ducts	m	6	
Ø250 Swirl type diffusers	No	4	
Ø250 Butterfly dampers	No	2	
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1	
Wall mounted remote controller	No	1	
SHUI4 - Open plan office, Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 400x 300 duct
Transformation, 400 x 300 to 300x 300 duct

400 x 300 Duct
300 x 300 Duct

300 x 300 Stop end plate

Diffusers - 2nd Fix

Ø250 Spigots
Ø250 Round ducts
Ø250 Supply flex ducts
Ø250 Swirl type diffusers
Ø250 Butterfly dampers

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

Wall mounted remote controller

SHUI4 - Communication officers, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct
Transformation, 600 x 300 to 500x 300 duct
Transformation, 500 x 300 to 300x 300 duct

600 x 300 Duct
500 x 300 Duct
300 x 300 Duct

300 x 300 Stop end plate

Diffusers - 2nd Fix

Ø200 Spigots
Ø200 Round ducts
Ø200 Supply flex ducts
Ø200 Swirl type diffusers
Ø200 Butterfly dampers

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

Wall mounted remote controller

SHUI4 - Meeting room, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct

600 x 300 Duct

600 x 300 Stop end plate

Diffusers - 2nd Fix

Ø300 Spigots
Ø300 Round ducts
Ø300 Supply flex ducts
Ø300 Swirl type diffusers
Ø300 Butterfly dampers

700 x 700 x 250 Plenum box, Internally insulated by sonic liner.
600 x 600 RAG+OBD c/w 1 x 400dia flex connection. with filter

Wall mounted remote controller

No
No

m
m

No

No
m
m
No
No

No
No

No

SHUI4 - Communication officers, Hide away unit

No

No

No

No
No
No

m
m
m

No

No

No
m
m
No
No

No
No

No

SHUI4 - Meeting room, Hide away unit

No

No

No

No

m

No

No

No
m
m
No
No

No
No

No

1
1

5
5

1

4
4
6
4
-

1
1

1

SHUI4 - Communication officers, Hide away unit

1

1

1

1
1
1

10
12
8

1

6

10
10
6
2

1
1

1

SHUI4 - Meeting room, Hide away unit

1

10

1

1

10

1

2

1
3
2
-

1
1

1

SHUI4 - GM Co Services, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct

No

1

600 x 300 Duct

m

10

600 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø300 Spigots

No

2

Ø300 Round ducts

m

1

Ø300 Supply flex ducts

m

3

Ø300 Swirl type diffusers

No

2

Ø300 Butterfly dampers

No

-

700 x 700 x 250 Plenum box, Internally insulated by sonic liner.

No

1

600 x 600 RAG+OBD c/w 1 x 400dia flex connection. with filter

No

1

Wall mounted remote controller

No

1

SHUI4 - Reception+Security Chk point, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 400x 300 duct

No

1

Transformation, 400 x 300 to 300x 300 duct

No

1

400 x 300 Duct

m

5

300 x 300 Duct

m

4

300 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø250 Spigots

No

4

Ø250 Round ducts

m

2

Ø250 Supply flex ducts

m

6

Ø250 Swirl type diffusers

No

4

Ø250 Butterfly dampers

No

2

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.

No

1

1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

No

1

Wall mounted remote controller

No

1

SHUI4 - Boardroom, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 400x 300 duct

No

1

Transformation, 400 x 300 to 300x 300 duct

No

1

400 x 300 Duct

m

8

300 x 300 Duct

m

5

300 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø300 Spigots

No

3

Ø300 Round ducts

m

2

Ø300 Supply flex ducts

m

5

Ø300 Swirl type diffusers

No

3

Ø300 Butterfly dampers

No

1

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.

No

1

1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

No

1

Wall mounted remote controller	No	1		
SHUI4 - Pre Metal open plan, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 500x 300 duct	No	1		
Transformation, 500 x 300 to 400x 300 duct	No	1		
500 x 300 Duct	m	6		
400 x 300 Duct	m	4		
400 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø300 Spigots	No	4		
Ø300 Round ducts	m	4		
Ø300 Supply flex ducts	m	6		
Ø300 Swirl type diffusers	No	4		
Ø300 Butterfly dampers	No	-		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI4 - Pre Metal offices, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 400x 300 duct	No	1		
Transformation, 400 x 300 to 300x 300 duct	No	1		
400 x 300 Duct	m	12		
300 x 300 Duct	m	6		
300 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø200 Spigots	No	4		
Ø200 Round ducts	m	2		
Ø200 Supply flex ducts	m	6		
Ø200 Swirl type diffusers	No	4		
Ø200 Butterfly dampers	No	2		
700 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	2		
600 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	2		
Wall mounted remote controller	No	1		
SHUI4 - Licensing officer, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 400x 300 duct	No	1		
Transformation, 400 x 300 to 300x 300 duct	No	1		
400 x 300 Duct	m	5		
300 x 300 Duct	m	4		
300 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	2		
Ø250 Round ducts	m	2		
Ø250 Supply flex ducts	m	3		
Ø250 Swirl type diffusers	No	2		
Ø250 Butterfly dampers	No	-		

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.
 1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

No
 No

1
 1

Wall mounted remote controller

No

1

SHUI4 - Licensing offices, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 400x 300 duct
 Transformation, 400 x 300 to 300x 300 duct

No
 No

1
 1

400 x 300 Duct
 300 x 300 Duct

m
 m

3
 5

300 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø200 Spigots
 Ø200 Round ducts
 Ø200 Supply flex ducts
 Ø200 Swirl type diffusers
 Ø200 Butterfly dampers

No
 m
 m
 No
 No

3
 7
 5
 3
 -

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.
 1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

No
 No

1
 1

Wall mounted remote controller

No

1

SHUI4 - Reception, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct

No

1

600 x 300 Duct

m

2

600 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø300 Spigots
 Ø300 Round ducts
 Ø300 Supply flex ducts
 Ø300 Swirl type diffusers
 Ø300 Butterfly dampers

No
 m
 m
 No
 No

2
 1
 3
 2
 -

700 x 700 x 250 Plenum box, Internally insulated by sonic liner.
 600 x 600 RAG+OBD c/w 1 x 400dia flex connection. with filter

No
 No

1
 1

Wall mounted remote controller

No

1

SHUI3 - Licensing Admin, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct

No

1

600 x 300 Duct

m

2

600 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø250 Spigots
 Ø250 Round ducts
 Ø250 Supply flex ducts
 Ø250 Swirl type diffusers
 Ø250 Butterfly dampers

No
 m
 m
 No
 No

2
 1
 3
 2
 -

700 x 700 x 250 Plenum box, Internally insulated by sonic liner.
600 x 600 RAG+OBD c/w 1 x 400dia flex connection. with filter

No
No

2
2

Wall mounted remote controller

No

1

SHUI6 - Transformation, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 350 duct
Transformation, 600 x 350 to 500x 350 duct
Transformation, 500 x 350 to 300x 350 duct

No
No
No

1
1
1

600 x 350 Duct
500 x 350 Duct
300 x 350 Duct

m
m
m

10
7
6

300 x 350 Stop end plate

No

1

Diffusers - 2nd Fix

Ø350 Spigot
Ø350 Round ducts
Ø350 Supply flex duct
Ø350 Swirl type diffuser
Ø350 Butterfly damper
Ø250 Spigots
Ø250 Round ducts
Ø250 Supply flex ducts
Ø250 Swirl type diffusers
Ø250 Butterfly dampers

No
m
m
No
No
No
m
m
No
No

1
2
2
1
1
7
7
11
7
4

1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter

No
No

1
1

Wall mounted remote controller

No

1

SHUI3 - CEO, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 300 duct

No

1

600 x 300 Duct

m

2

600 x 300 Stop end plate

No

1

Diffusers - 2nd Fix

Ø250 Spigots
Ø250 Round ducts
Ø250 Supply flex ducts
Ø250 Swirl type diffusers
Ø250 Butterfly dampers

No
m
m
No
No

2
1
3
2
-

700 x 700 x 250 Plenum box, Internally insulated by sonic liner.
600 x 600 RAG+OBD c/w 1 x 400dia flex connection. with filter

No
No

1
1

Wall mounted remote controller

No

1

SHUI4 - CEO, Hide away unit

Ducted split unit complete with all piping, supports, hangers etc

Ducts

Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.

Transformation, 1200 x 400 to 600x 400 duct

No

1

600 x 400 Duct

m

2

600 x 400 Stop end plate

No

1

Diffusers - 2nd Fix			
Ø350 Spigots	No	2	
Ø350 Round ducts	m	1	
Ø350 Supply flex ducts	m	3	
Ø350 Swirl type diffusers	No	2	
Ø350 Butterfly dampers	No	-	
700 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1	
600 x 600 RAG+OBD c/w 1 x 400dia flex connection. with filter	No	1	
SHUI3 - Valuation, Hide away unit			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 600x 400 duct	No	1	
600 x 400 Duct	m	10	
600 x 400 Stop end plate	No	1	
Diffusers - 2nd Fix			
Ø250 Spigots	No	5	
Ø250 Round ducts	m	14	
Ø250 Supply flex duct	m	8	
Ø250 Swirl type diffusers	No	5	
Ø250 Butterfly damper	No	2	
700 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	2	
600 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	2	
Wall mounted remote controller	No	1	
SHUI3 - Viewing Circulation, Hide away units			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 500x 300 duct	No	3	
Transformation, 500 x 300 to 400x 300 duct	No	3	
Transformation, 400 x 300 to 300x 300 duct	No	3	
500 x 300 Duct	m	25	
400 x 300 Duct	m	21	
300 x 300 Duct	m	24	
300 x 300 Stop end plate	No	3	
Diffusers - 2nd Fix			
Ø300 Spigots	No	16	
Ø300 Round ducts	m	2	
Ø300 Supply flex ducts	m	18	
Ø300 Swirl type diffusers	No	112	
Ø300 Butterfly dampers	No	3	
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	3	
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	3	
Wall mounted remote controller	No	3	
SHUI3 - Viewing Circulation, Hide away units			
Ducted split unit complete with all piping, supports, hangers etc			
Ducts			
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.			
Transformation, 1200 x 400 to 600x 300 duct	No	4	
Transformation, 600 x 300 to 500x 300 duct	No	4	
Transformation, 500 x 300 to 300x 300 duct	No	4	

4

600 x 300 Duct	m	12		
500 x 300 Duct	m	20		
300 x 300 Duct	m	20		
300 x 300 Stop end plate	No	4		
Diffusers - 2nd Fix				
Ø150 Spigots	No	25		
Ø150 Round ducts	m	13		
Ø150 Supply flex ducts	m	38		
Ø150 Swirl type diffusers	No	25		
Ø150 Butterfly dampers	No	4		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	4		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	4		
Wall mounted remote controller	No	4		
BILL 4 - SECOND FLOOR				
4,5kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	40		
Condensate pipes, 32mm dia Upvc, class 16.	m	25		
3,6kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	4		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	198		
Condensate pipes, 32mm dia Upvc, class 16.	m	110		
4,5kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	82		
Condensate pipes, 32mm dia Upvc, class 16.	m	45		
7,1kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	8		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	35		
8,2kW Ceiling Cassette indoor unit - single phase, 15amp, 30W.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	52		
Condensate pipes, 32mm dia Upvc, class 16.	m	39		
28kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
8,2kW Hideaway indoor unit - single phase, 15amp, 270W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
10,6kW Hideaway indoor unit - single phase, 15amp, 800W.	No	1		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
12,3kW Hideaway indoor unit - single phase, 15amp, 270W.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	50		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
22kW Hideaway indoor unit - single phase, 15amp, 270W.	No	6		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	176		
Condensate pipes, 32mm dia Upvc, class 16.	m	60		
2,1kW Midwall indoor unit - single phase, 15amp, 21W.	No	9		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	180		
Condensate pipes, 32mm dia Upvc, class 16.	m	94		
2,2kW Midwall indoor unit - single phase, 15amp, 21W.	No	3		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	115		

Condensate pipes, 32mm dia Upvc, class 16.	m	60		
2,8kW Midwall indoor unit - single phase, 15amp, 21W.	No	16		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	360		
Condensate pipes, 32mm dia Upvc, class 16.	m	225		
3,6kW Midwall indoor unit - single phase, 15amp, 21W.	No	6		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	180		
Condensate pipes, 32mm dia Upvc, class 16.	m	80		
4,5kW Midwall indoor unit - single phase, 15amp, 21W.	No	6		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	70		
Condensate pipes, 32mm dia Upvc, class 16.	m	40		
12,5kW Midwall indoor unit - single phase, 15amp, 21W.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	60		
Condensate pipes, 32mm dia Upvc, class 16.	m	30		
7,1kW Midwall indoor unit - single phase, 15amp, 21W.	No	2		
Refrigerant pipes, Gas & Liquid complete with armaflex insulation, all to specifications.	m	70		
Condensate pipes, 32mm dia Upvc, class 16.	m	40		
SHUI5 - Open Floor plan, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 500x 300 duct	No	1		
Transformation, 500 x 300 to 350x 300 duct	No	1		
500 x 300 Duct	m	8		
350 x 300 Duct	m	4		
350 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	6		
Ø250 Round ducts	m	4		
Ø250 Supply flex ducts	m	9		
Ø250 Swirl type diffusers	No	6		
Ø250 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI5 - Incubation Open plan, Hide away units				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 600x 300 duct	No	1		
Transformation, 600 x 300 to 500x 300 duct	No	1		
Transformation, 500 x 300 to 300x 300 duct	No	1		
Transformation, 600 x 300 to 400x 300 duct	No	1		
600 x 300 Duct	m	18		
500 x 300 Duct	m	6		
400 x 300 Duct	m	3		
300 x 300 Duct	m	5		
350 x 300 Stop end plate	No	1		
400 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	15		
Ø250 Round ducts	m	6		
Ø250 Supply flex ducts	m	23		
Ø250 Swirl type diffusers	No	15		

Ø250 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	2		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	2		
Wall mounted remote controller	No	2		
SHUI4 - Reception, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 400x 300 duct	No	1		
Transformation, 400 x 300 to 300x 300 duct	No	1		
400 x 300 Duct	m	8		
300 x 300 Duct	m	4		
300 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø250 Spigots	No	4		
Ø250 Round ducts	m	4		
Ø250 Supply flex ducts	m	6		
Ø250 Swirl type diffusers	No	4		
Ø250 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI5 - Open Floor Plan, Hide away units				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 450x 300 duct	No	2		
Transformation, 450 x 300 to 350x 300 duct	No	2		
450 x 300 Duct	m	10		
350 x 300 Duct	m	11		
350 x 300 Stop end plate	No	2		
Diffusers - 2nd Fix				
Ø250 Spigots	No	8		
Ø250 Round ducts	m	2		
Ø250 Supply flex ducts	m	12		
Ø250 Swirl type diffusers	No	8		
Ø250 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	2		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	2		
Wall mounted remote controller	No	2		
SHUI4 - Reception, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 500x 300 duct	No	1		
Transformation, 500 x 300 to 400x 300 duct	No	1		
500 x 300 Duct	m	10		
400 x 300 Duct	m	11		
400 x 300 Stop end plate	No	2		
Diffusers - 2nd Fix				
Ø250 Spigots	No	5		
Ø250 Round ducts	m	6		
Ø250 Supply flex ducts	m	5		
Ø250 Swirl type diffusers	No	5		

Ø250 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI4 - Boardroom, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 600x 400 duct	No	1		
600 x 400 Duct	m	2		
600 x 400 Stop end plate	No	2		
Diffusers - 2nd Fix				
Ø350 Spigots	No	2		
Ø350 Round ducts	m	1		
Ø350 Supply flex ducts	m	3		
Ø350 Swirl type diffusers	No	2		
Ø350 Butterfly dampers	No	-		
700 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
600 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI4 - Viewing room, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 500x 300 duct	No	1		
Transformation, 500 x 300 to 400x 300 duct	No	1		
Transformation, 400 x 300 to 300x 300 duct	No	1		
500 x 300 Duct	m	5		
400 x 300 Duct	m	6		
300 x 300 Duct	m	3		
300 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø200 Spigots	No	5		
Ø200 Round ducts	m	1		
Ø200 Supply flex ducts	m	5		
Ø200 Swirl type diffusers	No	5		
Ø200 Butterfly dampers	No	2		
1200 x 700 x 250 Plenum box, Internally insulated by sonic liner.	No	1		
1200 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
Wall mounted remote controller	No	1		
SHUI4 - Boardroom, Hide away unit				
Ducted split unit complete with all piping, supports, hangers etc				
Ducts				
Supply and install supply and return air ducting with external insulation, 25mm FRK. complete with supports and duct tape etc.				
Transformation, 1200 x 400 to 500x 300 duct	No	1		
500 x 300 Duct	m	5		
500 x 300 Stop end plate	No	1		
Diffusers - 2nd Fix				
Ø300 Spigots	No	4		
Ø300 Round ducts	m	4		
Ø300 Supply flex ducts	m	6		
Ø300 Swirl type diffusers	No	4		
Ø300 Butterfly dampers	No	2		

	700 x 700 x 250 Plenum box, Internally insulated by sonic liner. 600 x 600 RAG+OBD c/w 2 x 400dia flex connection. with filter	No	1		
		No	1		
	Wall mounted remote controller	No	1		
5	BILL 5 - DX, VRV OUTDOOR UNITS & CONTROLS				
	BC Box 16 Ports, 0,31kW power input, 1 phase each.	No	15		
	Central controls	No	3		
	Ground Floor VRV Condenser, 520kW - 103kW power input, 3phase.	No	1		
	First Floor VRV Condenser, 367kW - 80,78kW power input, 3phase	No	1		
	Second Floor VRV Condenser, 458kW - 92,32kW power input, 3phase.	No	1		
	Ground Floor Split Condenser, 3,7kW - 32A breaker	No	4		
	First Floor Split Condenser, 2,5kW - 20A breaker	No	1		
	First Floor Split Condenser, 3,2kW - 32A breaker	No	2		
	Second Floor Split Condenser, 3,7kW - 32A breaker	No	2		
	Second Floor Split Condenser, 7,1kW - 32A breaker	No	2		
6	BILL 6 - TOILETS EXTRACTION				
	GROUND FLOOR				
3,1	Toilets Extract Fan No 1				
	200l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
3,2	Toilets Extract Fan No 2				
	195l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
3,3	Toilets Extract Fan No 3				
	200l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				

	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
	FIRST FLOOR				
3,4	Toilets Extract Fan No 1				
	200l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
3,5	Toilets Extract Fan No 2				
	195l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
3,6	Toilets Extract Fan No 3				
	200l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
	SECOND FLOOR				
3,7	Toilets Extract Fan No 1				
	200l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		

	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
3,8	Toilets Extract Fan No 2				
	390l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø400 dia. Cowl+WMS	No	1		
	350 x 300 extract duct	m	20		
	350 x 300 mm (90 Degrees) Bend duct	No	1		
	350 x 300mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	4		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	16		
	200 dia. Spigots	No	4		
	200 dia. Flex ducts	m	12		
	200 dia. Disc valves	No	4		
3,9	Toilets Extract Fan No 3				
	200l/s AMS/Donkin Axial extract flow fan with 1440rpm/200Pa@1.2kg/m ³ , 0,5kW motor with 1.5pod silencers	No	1		
	ø300 dia. Cowl+WMS	No	1		
	300 x 250 extract duct	m	20		
	300 x 250 mm (90 Degrees) Bend duct	No	1		
	300 x 250 mm Stop end plate	No	1		
	Balancing damper, 200Dia	No	2		
	Accessories - 2nd Fix				
	Hygizone extract system c/w piping and fittings	No	8		
	200 dia. Spigots	No	2		
	200 dia. Flex ducts	m	6		
	200 dia. Disc valves	No	2		
7	BILL 7 - HVAC ELECTRICAL				
7,01	Electrical installation and wiring, complete for all AC units and fans, including DB's local starter/isolator , controls etc	Lot	1		
7,02	Fitting and wiring of wall mounted unit controllers, sensors at the indicated positions	Lot	1		
7,03	Cable trays, Conduits and trunkings of refrigerant and drain pipes	Lot	1		
7,04	Labelling of all electrical equipment	Lot	1		
8	BILL 8 - COMMISSIONING AND TESTING, DRAWINGS, MAINTENANCE AND SERVICING				
8,01	Testing, commissioning and handover of the works	Item	1		
8,02	3 sets of Operating and Maintenance manuals with as built drawings	Item	1		
8,03	Comprehensive service and maintenance during the 12 months guarantee period including spare filters	Item	1		
9	BILL 9 - PROVISIONAL SUMS				
9,01	Additional duct fittings and balancing dampers due to partition walls.	Item	1	60 000,00	R 60 000
9,02	Air diffusion - grilles, louvres and diffusers	Item	1	40 000,00	R 40 000
9,03	HVAC Fresh air supply	Item	1	400 000,00	R 400 000

CARRY ALL SUB TOTAL TO SUMMARY PAGE.

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(Carried forward to Summary - JMP)

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