

TPS

Taylor Project Services LLP
BUILDING SERVICES CONSULTANTS

TPS^{LLP} : 21 Bedford Square, London

VRV Schedules – Planning Issue

2-pipe Heat Pump System - Ground Floor

Summer Room Conditions 22 °C DB 50% RH
Winter Room Conditions 20 °C DB 30% RH
Minimum FCU Supply Temperature 12 °C DB Min 11.2 °C WB Min
Fan Coil Cooling S.H.R 0.75 To be confirmed by FCU manufacturer
Cooling capacities to be selected against external condenser sized at 35°C ambient.
Heating capacities to be selected against -4°C external ambient temperature.
Internal units to be supplied with BS box and controller to facilitate individual heating / cooling.
Internal Units Selected against a nominal NR35 to achieve a maximum open plan room noise level of NR38.
Internal units to be supplied with all recommended fixings, condensate pumps and return air controls.

Unit Ref	FCU Area m ²	Sens Cooling W/m ²	Heating Load W/m ²	Primary Supply Air l/s	Air On Temp °C	Estimated	Cooling		Heating		Indoor Unit Data*						Indoor Unit Type	
						Supply Air Temp °C	Sens Duty kW	Total Duty kW	Heating kW	Air Flow l/s	Model / Speed	Notes / Dimensions HxWxD (With Decoration Panel)	Spigot Configuration					
													No. Off	Blanked				
VRV/G/1	22	110	80	0	22	22	2.38	3.17	1.73	175	40	FXNQ-A 620x950x200					Vertical Chassis Unit	
VRV/G/2	22	110	80	0	22	22	2.38	3.17	1.73	175	40	FXNQ-A 620x950x200					Vertical Chassis Unit	
VRV/G/3	17	85	80	0	22	22	1.45	1.93	1.36	130	20	FXNQ-A 620x750x200					Vertical Chassis Unit	
VRV/G/4	24	85	80	0	22	22	2.00	2.67	1.88	130	32	FXNQ-A 620x750x200					Vertical Chassis Unit	
VRV/G/5	15	85	80	0	22	22	1.29	1.72	1.22	130	20	FXNQ-A 620x750x200					Vertical Chassis Unit	
Floor Totals	99						9.49	12.65	7.91		152							
Notes 1. System to include iTouch central controller linked to all FCU's. 2. Air Flow selected on Nom setting 3. Percentage of design selected on Total Cooling 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C 5. All plant selected against Daikin. 6. Each unit to have separate condensate pump if gravity drainage not possible. 7. Each zone to be supplied with BS Box													Condenser Details - Daikin RXYSCQ5					Percentage of Design
													External Ambient Conditions			°C S/°C W	35/-4	
													Capacity Index Limit				162	94%
													Nominal Cooling			kW	14	90%
													Nominal Heating			kW	14	57%
													Limiting Dimensions (HxWxD)			mm		
													823x940x460					
													Limiting Weight			kg	88	
													Electrical Supply			V/Ph/Hz	400/3/50	
													Power Input			kW		
													Running Current			Amps	6.8	
													HRC Fuse Rating			Amps	16	
													Max Pipe Length (indoor / outdoor)			m	300	
													Max. Pipe lift			m	30	
													SPL			dBA @ m	51	

- Notes
1. System to include iTouch central controller linked to all FCU's.
 2. Air Flow selected on Nom setting
 3. Percentage of design selected on Total Cooling
 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C
 5. All plant selected against Daikin.
 6. Each unit to have separate condensate pump if gravity drainage not possible.
 7. Each zone to be supplied with BS Box

2-pipe Heat Pump System - 1st Floor

Summer Room Conditions 22 °C DB 50% RH
Winter Room Conditions 20 °C DB 30% RH
Minimum FCU Supply Temperature 12 °C DB Min 11.2 °C WB Min
Fan Coil Cooling S.H.R 0.75 To be confirmed by FCU manufacturer
Cooling capacities to be selected against external condenser sized at 35°C ambient.
Heating capacities to be selected against -4°C external ambient temperature.
Internal units to be supplied with BS box and controller to facilitate individual heating / cooling.
Internal Units Selected against a nominal NR35 to achieve a maximum open plan room noise level of NR38.
Internal units to be supplied with all recommended fixings, condensate pumps and return air controls.

						Estimated	Cooling		Heating		Indoor Unit Data*						
Unit Ref	FCU Area m ²	Sens Cooling W/m ²	Heating Load W/m ²	Primary Supply Air l/s	Air On Temp °C	Supply Air Temp °C	Sens Duty kW	Total Duty kW	Heating kW	Air Flow l/s	Model / Speed	Notes / Dimensions HxWxD (With Decoration Panel)	Spigot Configuration		Indoor Unit Type		
													No. Off	Blanked			
VRV/1/1	23	110	85	0	22	23	2.55	3.40	1.97	175	40	FXNQ-A 620x950x200			Vertical Chassis Unit		
VRV/1/2	23	110	85	0	22	23	2.55	3.40	1.97	175	40	FXNQ-A 620x950x200			Vertical Chassis Unit		
VRV/1/3	29	85	85	0	22	24	2.47	3.29	2.47	175	40	FXNQ-A 620x950x200			Vertical Chassis Unit		
Floor Totals	75						7.57	10.09	6.41		120						
Notes 1. System to include iTouch central controller linked to all FCU's. 2. Air Flow selected on Nom setting 3. Percentage of design selected on Total Cooling 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C 5. All plant selected against Daikin. 6. Each unit to have separate condensate pump if gravity drainage not possible. 7. Each zone to be supplied with BS Box													Condenser Details - Daikin RXYSCQ4				Percentage of Design
													External Ambient Conditions		°C S/°C W	35/-4	
													Capacity Index Limit			130	92%
													Nominal Cooling		kW	12.1	83%
													Nominal Heating		kW	12.1	53%
													Limiting Dimensions (HxWxD)		mm		
													823x940x460				
													Limiting Weight		kg	88	
													Electrical Supply		V/Ph/Hz	400/3/50	
													Power Input		kW		
													Running Current		Amps	5.3	
													HRC Fuse Rating		Amps	16	
													Max Pipe Length (indoor / outdoor)		m	300	
													Max. Pipe lift		m	30	
													SPL		dBA @ m	51	

- Notes**
1. System to include iTouch central controller linked to all FCU's.
 2. Air Flow selected on Nom setting
 3. Percentage of design selected on Total Cooling
 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C
 5. All plant selected against Daikin.
 6. Each unit to have separate condensate pump if gravity drainage not possible.
 7. Each zone to be supplied with BS Box

2-pipe Heat Pump System - Coach House

Summer Room Conditions 22 °C DB 50% RH
Winter Room Conditions 20 °C DB 30% RH
Minimum FCU Supply Temperature 12 °C DB Min 11.2 °C WB Min
Fan Coil Cooling S.H.R 0.75 To be confirmed by FCU manufacturer

Cooling capacities to be selected against external condenser sized at 35°C ambient.
Heating capacities to be selected against -4°C external ambient temperature.
Internal units to be supplied with BS box and controller to facilitate individual heating / cooling.
Internal Units Selected against a nominal NR35 to achieve a maximum open plan room noise level of NR38.
Internal units to be supplied with all recommended fixings, condensate pumps and return air controls.

						Estimated	Cooling		Heating	Indoor Unit Data*					
Unit Ref	FCU Area m ²	Sens Cooling W/m ²	Heating Load W/m ²	Primary Supply Air l/s	Air On Temp °C	Supply Air Temp °C	Sens Duty kW	Total Duty kW	Heating kW	Air Flow l/s	Model / Speed	Notes / Dimensions HxWxD (With Decoration Panel)	Spigot Configuration		Indoor Unit Type
													No. Off	Blanked	
VRV/G/7	14	100	85	0	22	23	1.35	1.80	1.15	175	20	FXNQ-A 620x750x200			Vertical Chassis Unit
VRV/G/8	16	100	85	0	22	23	1.56	2.09	1.33	130	25	FXNQ-A 620x750x200			Vertical Chassis Unit
VRV/1/4	18	100	85	0	22	26	1.84	2.45	1.56	130	32	FXNQ-A 620x750x200			Vertical Chassis Unit
VRV/1/5	18	100	85	0	22	26	1.84	2.45	1.56	130	32	FXNQ-A 620x750x200			Vertical Chassis Unit
Floor Totals	66						6.59	8.79	5.60		109				

- Notes**
- 1. System to include iTouch central controller linked to all FCU's.
 - 2. Air Flow selected on Nom setting
 - 3. Percentage of design selected on Total Cooling
 - 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C
 - 5. All plant selected against Daikin.
 - 6. Each unit to have separate condensate pump if gravity drainage not possible.
 - 7. Each zone to be supplied with BS Box

Condenser Details - Daikin RXYSCQ4		Percentage of Design	
External Ambient Conditions	°C S/°C W	35/-4	
Capacity Index Limit		130	84%
Nominal Cooling	kW	12.1	73%
Nominal Heating	kW	12.1	46%
Limiting Dimensions (HxWxD)	mm		
823x940x460			
Limiting Weight	kg	88	
Electrical Supply	V/Ph/Hz	400/3/50	
Power Input	kW		
Running Current	Amps	5.3	
HRC Fuse Rating	Amps	16	
Max Pipe Length (indoor / outdoor)	m	300	
Max. Pipe lift	m	30	
SPL	dBA @ m	51	

2-pipe Heat Pump System - Second Floor

Summer Room Conditions 22 °C DB 50% RH
Winter Room Conditions 20 °C DB 30% RH
Minimum FCU Supply Temperature 12 °C DB Min 11.2 °C WB Min
Fan Coil Cooling S.H.R 0.75 To be confirmed by FCU manufacturer
Cooling capacities to be selected against external condenser sized at 35°C ambient.
Heating capacities to be selected against -4°C external ambient temperature.
Internal units to be supplied with BS box and controller to facilitate individual heating / cooling.
Internal Units Selected against a nominal NR35 to achieve a maximum open plan room noise level of NR38.
Internal units to be supplied with all recommended fixings, condensate pumps and return air controls.

Unit Ref	FCU Area m ²	Sens Cooling W/m ²	Heating Load W/m ²	Primary Supply Air l/s	Air On Temp °C	Estimated	Cooling		Heating		Indoor Unit Data*						Indoor Unit Type	
						Supply Air Temp °C	Sens Duty kW	Total Duty kW	Heating kW	Air Flow l/s	Model / Speed	Notes / Dimensions HxWxD (With Decoration Panel)	Spigot Configuration					
													No. Off	Blanked				
VRV/2/1	13	110	85	0	22	23	1.44	1.92	1.11	130	20	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/2/2	13	110	85	0	22	23	1.44	1.92	1.11	130	20	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/2/3	14	110	85	0	22	24	1.53	2.05	1.19	130	25	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/2/4	12	85	85	0	22	26	0.99	1.33	0.99	130	20	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/2/5	12	85	85	0	22	27	0.99	1.33	0.99	130	20	FXLQ-A 600x1000x232					Floor Mounted Cased	
Floor Totals	64						6.41	8.54	5.40		105							
Notes 1. System to include iTouch central controller linked to all FCU's. 2. Air Flow selected on Nom setting 3. Percentage of design selected on Total Cooling 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C 5. All plant selected against Daikin. 6. Each unit to have separate condensate pump if gravity drainage not possible. 7. Each zone to be supplied with BS Box													Condenser Details - Daikin RXYSCQ4					Percentage of Design
													External Ambient Conditions			°C S/°C W	35/-4	
													Capacity Index Limit				130	81%
													Nominal Cooling			kW	12.1	71%
													Nominal Heating			kW	12.1	45%
													Limiting Dimensions (HxWxD)			mm		
													823x940x460					
													Limiting Weight			kg	88	
													Electrical Supply			V/Ph/Hz	400/3/50	
													Power Input			kW		
													Running Current			Amps	5.3	
													HRC Fuse Rating			Amps	16	
													Max Pipe Length (indoor / outdoor)			m	300	
													Max. Pipe lift			m	30	
													SPL			dBA @ m	51	

- Notes**
- 1. System to include iTouch central controller linked to all FCU's.
 - 2. Air Flow selected on Nom setting
 - 3. Percentage of design selected on Total Cooling
 - 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C
 - 5. All plant selected against Daikin.
 - 6. Each unit to have separate condensate pump if gravity drainage not possible.
 - 7. Each zone to be supplied with BS Box

2-pipe Heat Pump System - Third Floor

Summer Room Conditions 22 °C DB 50% RH
Winter Room Conditions 20 °C DB 30% RH
Minimum FCU Supply Temperature 12 °C DB Min 11.2 °C WB Min
Fan Coil Cooling S.H.R 0.75 To be confirmed by FCU manufacturer
Cooling capacities to be selected against external condenser sized at 35°C ambient.
Heating capacities to be selected against -4°C external ambient temperature.
Internal units to be supplied with BS box and controller to facilitate individual heating / cooling.
Internal Units Selected against a nominal NR35 to achieve a maximum open plan room noise level of NR38.
Internal units to be supplied with all recommended fixings, condensate pumps and return air controls.

Unit Ref	FCU Area m ²	Sens Cooling W/m ²	Heating Load W/m ²	Primary Supply Air l/s	Air On Temp °C	Estimated	Cooling		Heating		Indoor Unit Data*						Indoor Unit Type	
						Supply Air Temp °C	Sens Duty kW	Total Duty kW	Heating kW	Air Flow l/s	Model / Speed	Notes / Dimensions HxWxD (With Decoration Panel)	Spigot Configuration					
													No. Off	Blanked				
VRV/3/1	22	110	85	0	22	23	2.45	3.26	1.89	175	40	FXLQ-A 600x1140x232					Floor Mounted Cased	
VRV/3/2	14	110	85	0	22	23	1.58	2.11	1.22	130	25	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/3/3	18	85	85	0	22	26	1.49	1.98	1.49	130	25	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/3/4	18	85	85	0	22	26	1.53	2.04	1.53	130	25	FXLQ-A 600x1000x232					Floor Mounted Cased	
VRV/3/5	18	85	85	0	22	27	1.53	2.04	1.53	130	25	FXLQ-A 600x1000x232					Floor Mounted Cased	
Floor Totals		90					8.58	11.44	7.66		140							
Notes 1. System to include iTouch central controller linked to all FCU's. 2. Air Flow selected on Nom setting 3. Percentage of design selected on Total Cooling 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C 5. All plant selected against Daikin. 6. Each unit to have separate condensate pump if gravity drainage not possible. 7. Each zone to be supplied with BS Box													Condenser Details - Daikin RXYSCQ5					Percentage of Design
													External Ambient Conditions			°C S/°C W	35/-4	
													Capacity Index Limit				162	86%
													Nominal Cooling			kW	14	82%
													Nominal Heating			kW	14	55%
													Limiting Dimensions (HxWxD)			mm		
													823x940x460					
													Limiting Weight			kg	88	
													Electrical Supply			V/Ph/Hz	400/3/50	
													Power Input			kW		
													Running Current			Amps	6.8	
													HRC Fuse Rating			Amps	16	
													Max Pipe Length (indoor / outdoor)			m	300	
													Max. Pipe lift			m	30	
													SPL			dBA @ m	51	

- Notes
1. System to include iTouch central controller linked to all FCU's.
 2. Air Flow selected on Nom setting
 3. Percentage of design selected on Total Cooling
 4. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C
 5. All plant selected against Daikin.
 6. Each unit to have separate condensate pump if gravity drainage not possible.
 7. Each zone to be supplied with BS Box

21 Bedford Square, London - Split System

Summer Room Conditions 22 °C DB 50% RH
Winter Room Conditions 20 °C DB 30% RH
Minimum FCU Supply Temperature 12 °C DB Min 11.2 °C WB Min
Fan Coil Cooling S.H.R 0.75 To be confirmed by FCU manufacturer
Cooling capacities to be selected against external condenser sized at 35°C ambient.
Heating capacities to be selected against -4°C external ambient temperature.
Internal units to be supplied with BS box and controller to facilitate individual heating / cooling.
Internal Units Selected against a nominal NR35 to achieve a maximum open plan room noise level of NR38.
Internal units to be supplied with all recommended fixings, condensate pumps and return air controls.

							Estimated	Cooling		Heating	Indoor Unit Data*					
Unit Ref	Zone Ref Room Ref	FCU Area m ²	Sens Cooling W/m ²	Heating Load W/m ²	Primary Supply Air l/s	Air On Temp °C	Supply Air Temp °C	Sens Duty kW	Total Duty kW	Heating kW	Air Flow l/s	Model / Speed	Notes / Dimensions HxWxD (With Decoration Panel)	Spigot Configuration		Indoor Unit Type
														No. Off	Blanked	
AC/1	RB05	15	250	85	0	22	22	3.75	5.00	1.28	130	60	Daikin FTXS60G			Wall Mounted
													Condenser Details - RXS60F			
Floor Totals		15						3.75	5.00	1.28		60				
													Condenser Details - Daikin RXS60F			Percentage of Design
													External Ambient Conditions	°C S/°C W	35/-4	
													Capacity Index Limit			
													Nominal Cooling	kW	6	83%
													Nominal Heating	kW	7	18%
													Limiting Dimensions (HxWxD)	mm		
													735x825x300			
													Limiting Weight	kg	48	
													Electrical Supply	V/Ph/Hz	230/1/50	
													Power Input	kW		
													Running Current	Amps	8.78	
													HRC Fuse Rating	Amps	20	
													Max Pipe Length (indoor / outdoor)	m	30	
													Max. Pipe lift	m	15	
													SPL	dBA @ m	49	

- Notes
1. External condensers shall be rated at the above conditions but shall operate reliably in temperatures from -4°C to 35°C
 2. All plant selected against Daikin.
 3. Controller to be wall mounted within sever room.