



Produced on 14/07/2016 with Xpress Selection V7.4.2 - database Central 10.2.8

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Project address United Kingdom
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Client name BJA Refrigeration
Revision Rev 1

Selection parameters of the indoor units can be found under the chapter Indoor unit details
Selection parameters of the outdoor units can be found under the chapter Outdoor unit details
Only the data published in the data book are correct. This program uses close approximations of these data.

1. Material List

Model	Qty	Description
RXYSQ10TY1	1	VRV IV Mini Standard/Large 3phase (RXYSQ-TY1)
FXFQ63A	3	VRV FXFQ-A - Round flow cassette
KHRQ22M20T	1	Refnet branch piping kit
KHRQ22M29T9	1	Refnet branch piping kit
BRC1E52A	1	Remote controller
BYCQ140DG	3	Self cleaning decoration panel



2. Indoor Unit Details

2.1. Table of Abbreviations

Name	Logical name of the device
FCU	Device model name
Tmp C	Indoor conditions in cooling (dry bulb temp. / RH)
Rq TC	Required total cooling capacity
Max TC	Available total cooling capacity
Rq SC	Required sensible cooling capacity
Max SC	Available sensible cooling capacity
Tevap	Evaporating temperature of indoor unit coil
Tmp H	Indoor temperature in heating
Rq HC	Required heating capacity
Max HC	Available heating capacity
Airflow	Supplied airflow
Sound	Sound pressure low and high
PS	Power supply (voltage and phases)
MCA	Minimum Circuit Amps
WxHxD	WidthxHeightxDepth
Wght	Weight of the device
PI-C 50Hz	Power input in cooling at 50Hz
PI-H 50Hz	Power input in heating at 50Hz

2.2. Out1 - RXYSQ10TY1

Capacity data at conditions and connection ratio (75%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tmp H	Rq HC	Max HC	Airflow
		°C	kW	kW	kW	kW	°C	°C	kW	kW	l/s
Ind1	FXFQ63A	23.0 / 50%	n/a	5.8	n/a	4.6	6.0	21.0	n/a	7.7	275
Ind2	FXFQ63A	23.0 / 50%	n/a	5.8	n/a	4.6	6.0	21.0	n/a	7.7	275
Ind3	FXFQ63A	23.0 / 50%	n/a	5.8	n/a	4.6	6.0	21.0	n/a	7.7	275

Required cooling capacity towards the outdoor unit: 17.3kW.

Required heating capacity towards the outdoor unit: 23.1kW.

The sum of the required indoor unit capacities is 17.3kW for cooling and 23.1kW for heating.

However, the outdoor unit selection uses reduced load values for cooling of 8.7kW (= -50%).

Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

Name	Sound	PS	MCA	WxHxD	Wght	PI-C 50Hz	PI-H 50Hz
	dBA		A	mm	kg	kW	kW
Ind1	29-34	220V 1ph	0.4	840x204x840	21	0.061	0.061
Ind2	29-34	220V 1ph	0.4	840x204x840	21	0.061	0.061
Ind3	29-34	220V 1ph	0.4	840x204x840	21	0.061	0.061



Outdoor unit placed at the same level as the indoor units.



3. Outdoor Unit Details

3.1. Table of Abbreviations

Name	Logical name of the device
Model	Device model name
▼	Optimized selection: Smaller outdoor model selected than standard proposed model
Tmp C	Outdoor temperature in cooling
CC	Available cooling capacity
Rq CC	Required cooling capacity
Tmp H	Outdoor conditions in heating (dry bulb temp. / RH)
HC	Available heating capacity (integrated heating capacity)
Rq HC	Required heating capacity
Piping	Largest distance from indoor unit to outdoor unit
Bse Refr	Standard factory refrigerant charge (5m actual piping length) excluding extra refrigerant charge For calculation of extra refrigerant charge refer to the databook
GWP	Global Warming Potential
TCO ₂ eq.	Tonnes of CO ₂ equivalent
PS	Power supply (voltage and phases)
MCA	Minimum Circuit Amps
WxHxD	WidthxHeightxD
Wght	Weight of the device

3.2. Outdoor Details

Name	Model	Comb	Tmp C	CC	Rq CC	Tmp H	HC	Rq HC	
		%	°C	kW	kW	°C	kW	kW	
Out1	RXYSQ10TY1 ▼	75	35.0	20.9	8.7	-5.0 / 50%	22.8 (-1.5%)	23.1	

Name	Model	Piping	Refrigerant				
		m	Type	GWP	Bse Refr	Ex Refr	TCO ₂ eq.
					kg	kg	Tonnes
Out1	RXYSQ10TY1	25.0	R410A	2087.5	7.0	(¹)	14.6

The system contains fluorinated greenhouse gases.

(¹) The TCO₂ equivalent is calculated only considering the base refrigerant charge. Depending on the field pipe length, extra refrigerant needs to be added, which will increase the TCO₂ equivalent.

Name	Model	PS	MCA	WxHxD	Wght
			A	mm	kg
Out1	RXYSQ10TY1	400V 3Nph	22	940x1615x460	165



3.2.1. Out1 - RXYSQ10TY1

Model	Qty	Description
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FXFQ63A	3	VRV FXFQ-A - Round flow cassette
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KHRQ22M29T9	1	Refnet branch piping kit
BRC1E52A	1	Remote controller
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Piping Limitations

Connected indoor type(s): VRV	
Maximum total length	300.0m
Maximum longest actual length	120.0m
Maximum longest equivalent length	150.0m
Maximum equivalent length (size up of main pipe required if longer)	90.0m
Maximum length first branch to last branch (size up of intermediate pipes required if longer)	40.0m
Maximum length first branch to indoor units	40.0m
Maximum length of indoor units to nearest branch	40.0m
Maximum length difference between longest and shortest distance to indoor units	40.0m
Maximum height difference between indoor units	15.0m
Connection ratio range	50-130%

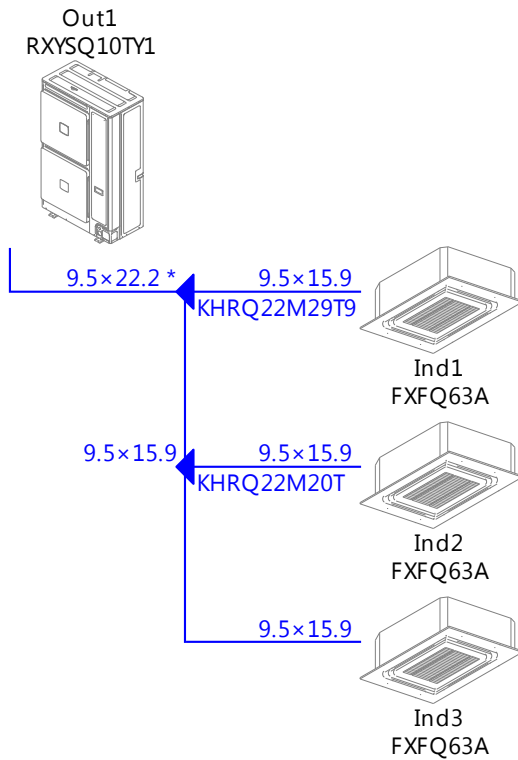
Pipe Capacities

Maximum Connection Index	Diameters
149.9	9.5×15.9
199.9	9.5×19.1
> 199.9	9.5×22.2
Main pipe size up	12.7×25.4

4. Piping Diagrams

Pipes marked with * in the diagrams must be connected to the device with a reducing joint.

4.1. Piping Out1



Warning: The pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

5. Wiring Diagrams

P1P2 = Please select the cable type and size in accordance with the databook.

F1F2 = Please select the cable type and size in accordance with the databook.

5.1. Wiring Out1

