H.M.C.R
Inversiones

TORRE ADMINISTRATIVA HOSPITAL UNIVERSITARIO ERASMO MEOZ

INFORME DE MEMORIAS DE CÁLCULO DE LOS SISTEMAS DE AIRE ACONDICIONADO Y VENTILACIÓN MECÁNICA

2022-03-26

1. BASES DEL DISEÑO

1.1 OBJETO

A continuación, se presenta el Informe de memorias de cálculo de las cargas térmicas para el proyecto TORRE ADMINISTRATIVA HOSPITAL UNIVERSITARIO ERAZMO MEOZ, ubicado en el municipio de CUCUTA – Norte De Santander (Colombia).

Para el cálculo se utilizó el programa Xpress Selection V9.8.0 Daikin Software. A continuación, se presentan las condiciones de entrada de los cálculos realizados.

1.2 CONDICIONES CLIMÁTICAS

Las condiciones climáticas consideradas están basadas en los datos históricos de temperatura y humedad del municipio de Cúcuta.

1.3 CONDICIONES DE DISEÑO

INTERIORES

Temperatura de bulbo seco	75 ºF±2
Humedad relativa	60%± 5%
Ventilación	Zonas comunes con ventilación natural.

EXTERIORES

Temperatura de bulbo seco	92 ºF
Temperatura de bulbo húmedo	85 ºF
Altitud	320Mt. s.n.m.m.

1.4 DATOS DE ENTRADA PARA EL CALCULO

Para determinar las cargas térmicas del edificio se tuvieron en cuenta los siguientes factores:

1.4.1 ENVOLVENTE DEL EDIFICIO

TECHOS Y CUBIERTAS

Para el material de techos y cubiertas se establece un coeficiente U según las características del techo de la instalación. En los cálculos realizados se consideró un coeficiente U= 0.17BTU/ (hr-ft²°F). Esto corresponde a un techo plano en concreto liviano de 4 in de espesor, con cielo falso suspendido sin aislamiento, que de acuerdo a los procedimientos de ASHRAE es un número de techo 3.

MUROS AL EXTERIOR

Para los muros al exterior se establece un coeficiente U según las características de los muros del edificio. En los cálculos realizados se consideró un coeficiente U= 0.278 BTU/ (hr-ft²-°F). Esto corresponde a pared en bloque de núcleo hueco de 4 in de espesor sin aislamiento, que de acuerdo con ASHRAE es un muro tipo D.

VENTANERIA

En los cálculos de la ventanería se tiene en cuenta un vidrio sin película anti-UV, con un coeficiente U de 0.83 BTU/ (hr-ft²-°F) y con un coeficiente de sombra propio de 0.64 dado por el grosor del vidrio, asumiendo que a las ventanas no se les colocará persianas internas.

DAIKIN

Produced on 27/03/2022 with Xpress Selection V9.8.0 - database DIL 17.2.1

Project name 7787 Planta Medica Cucuta
Project address Colombia
Reference - Client name
- Revision MM01

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 Type	Model Name	Qty	Description
Outdoor unit	RXQ12TATL	4	Cooling only VRV IV(TATL)
	RXQ16TATL	2	Cooling only VRV IV(TATL)
	RXQ18TATL	4	Cooling only VRV IV(TATL)
Indoor unit	FXAQ25AVM	5	VRV A(AVM) - Unidad montada en pared
	FXAQ40AVM	2	VRV A(AVM) - Unidad montada en pared
	FXAQ50AVM	3	VRV A(AVM) - Unidad montada en pared
	FXFSQ63AVM	0	VRV FS(AVM) - Ceiling Mounted Cassette(Round Flow with Sensing)
	FXMQ100PAVE	4	VRV M-PA - Unidad de conducto montada en el techo
	FXMQ125PAVE	7	VRV M-PA - Unidad de conducto montada en el techo
	FXMQ140PAVE	13	VRV M-PA - Unidad de conducto montada en el techo
	FXMQ200PVM	0	VRV M-PVM - Unidad de conducto montada en el techo
	FXMQ250PVM	0	VRV M-PVM - Unidad de conducto montada en el techo
	FXMQ32PAVE	0	VRV M-PA - Unidad de conducto montada en el techo
	FXMQ50PAVE	0	VRV M-PA - Unidad de conducto montada en el techo
	FXMQ63PAVE	0	VRV M-PA - Unidad de conducto montada en el techo
	FXMQ80PAVE	0	VRV M-PA - Unidad de conducto montada en el techo
	FXZQ32AVM	0	VRV Z(AVM) - Unidad de casete montada en el techo(Multiflujo Compacto)
	FXZQ40AVM	1	VRV Z(AVM) - Unidad de casete montada en el techo(Multiflujo Compacto)
	FXZQ50AVM	0	VRV Z(AVM) - Unidad de casete montada en el techo(Multiflujo Compacto)
Branch unit	BHFP22P100	3	Outdoor unit multi connection piping kit
	BHFP22P151	2	Outdoor unit multi connection piping kit
	KHRP26A22T	2	Refnet branch piping kit
	KHRP26A33T	3	Refnet branch piping kit
	KHRP26A72T	17	Refnet branch piping kit

	KHRP26A73T + KHRP26M73TP	26	Refnet branch piping kit
Centralized controller	DCM601A51	1	intelligent Touch Manager
Option or add-on	BYFQ60CAW	7	Grid ceiling panel
	BRC1E63	35	Wired Remote Controller (Navigation Remote Controller)
	BYCQ125EEF	2	Standard panel with sensing sensor(Fresh white)

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

Tdis C Indoor unit discharge air temperature in cooling

Tmp H Indoor temperature in heating

Rq HC Required heating capacity

Max HC Available heating capacity

Tdis H Indoor unit discharge air temperature in heating

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

2.2. UCA 01 RXQ54TATL

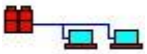
Capacity data at conditions and connection ratio (118%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tdis C	Tmp H	Rq HC	Max HC	Tdis H	Airflow
		°C	BTU/h	BTU/h	BTU/h	BTU/h	°C	°C	°C	BTU/h	BTU/h	°C	l/s
Área 1-1	FXMQ250PVM	27,0 / 50%	n/a	96008	n/a	71310	Auto	14,9	n/a	n/a	n/a	n/a	1400
Área 1-2	FXMQ250PVM	27,0 / 50%	n/a	96008	n/a	71310	Auto	14,9	n/a	n/a	n/a	n/a	1400
Área 2	FXAQ25AVM	27,0 / 50%	n/a	9607	n/a	7159	Auto	16,1	n/a	n/a	n/a	n/a	157
Área 3	FXAQ50AVM	27,0 / 50%	n/a	19214	n/a	13864	Auto	13,8	n/a	n/a	n/a	n/a	250
Área 4	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 5	FXMQ50PAVE	27,0 / 50%	n/a	19264	n/a	15037	Auto	15,1	n/a	n/a	n/a	n/a	300
Área 6	FXMQ32PAVE	27,0 / 50%	n/a	12284	n/a	9110	Auto	13,3	n/a	n/a	n/a	n/a	158
Área 7	FXFSQ63AVM	27,0 / 50%	n/a	24382	n/a	19497	Auto	15,1	n/a	n/a	n/a	n/a	392
Área 8	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 9	FXMQ80PAVE	27,0 / 50%	n/a	30865	n/a	22998	Auto	13,8	n/a	n/a	n/a	n/a	417
Área 10	FXMQ250PVM	27,0 / 50%	n/a	96008	n/a	71310	Auto	14,9	n/a	n/a	n/a	n/a	1400
Área 11	FXMQ140PAVE	27,0 / 50%	n/a	54906	n/a	39577	Auto	14,7	n/a	n/a	n/a	n/a	767

Required cooling capacity towards the outdoor unit: 612345BTU/h.
The sum of the required indoor unit capacities is 612345BTU/h for cooling.
However, the outdoor unit selection uses reduced load values for cooling of 551110BTU/h (= -10%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

The calculation shows the peak discharge temperatures (lowest temperature in case of cooling mode / highest temperature in case of heating mode), assuming the indoor unit is running at full load at the given indoor temperature design conditions. In practice the discharge temperature will modulate based on actual capacity requirements and during defrost mode (heating mode).
The analysis of the suction and discharge temperature values may help in preventing a cold draft and to ensure a thermal comfort level.

Name	Sound	PS	MCA	WxHxD	Wght
	dBA		A	mm	kg
Área 1-1	37-44	220V 1ph	10,1	1490×470×1100	105
Área 1-2	37-44	220V 1ph	10,1	1490×470×1100	105
Área 2	28,5-35	220V 1ph	0,6	795×290×266	12
Área 3	35,5-41	220V 1ph	0,7	1050×290×269	15
Área 4	35-42	230V 1ph	6,9	1490×470×1100	95
Área 5	37-41	220V 1ph	1,6	1000×300×700	35
Área 6	30-34	220V 1ph	0,6	550×300×700	25
Área 7	28-38	230V 1ph	0,6	840×256×840	22
Área 8	35-42	230V 1ph	6,9	1490×470×1100	95
Área 9	39-43	220V 1ph	2,3	1000×300×700	35
Área 10	37-44	220V 1ph	10,1	1490×470×1100	105
Área 11	43-46	220V 1ph	3,4	1400×300×700	46



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

2.3. UCA 02 RXQ24TATL

Capacity data at conditions and connection ratio (123%) as entered

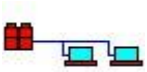
Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tdis C	Tmp H	Rq HC	Max HC	Tdis H	Airflow
		°C	BTU/h	BTU/h	BTU/h	BTU/h	°C	°C	°C	BTU/h	BTU/h	°C	l/s
Área 13	FXMQ140PAVE	27,0 / 50%	n/a	54906	n/a	39577	Auto	14,7	n/a	n/a	n/a	n/a	767
Área 14	FXMQ100PAVE	27,0 / 50%	n/a	38372	n/a	27976	Auto	14,5	n/a	n/a	n/a	n/a	533
Área 15	FXMQ80PAVE	27,0 / 50%	n/a	30865	n/a	22998	Auto	13,8	n/a	n/a	n/a	n/a	417
Área 16	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 17	FXMQ80PAVE	27,0 / 50%	n/a	30865	n/a	22998	Auto	13,8	n/a	n/a	n/a	n/a	417
Área 18	FXMQ140PAVE	27,0 / 50%	n/a	54906	n/a	39577	Auto	14,7	n/a	n/a	n/a	n/a	767

Required cooling capacity towards the outdoor unit: 286814BTU/h.
The sum of the required indoor unit capacities is 286814BTU/h for cooling.
However, the outdoor unit selection uses reduced load values for cooling of 229451BTU/h (= -20%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

The calculation shows the peak discharge temperatures (lowest temperature in case of cooling mode / highest temperature in case of heating mode), assuming the indoor unit is running at full load at the given indoor temperature design conditions. In practice the discharge temperature will modulate based on actual capacity requirements and during defrost mode (heating mode).

The analysis of the suction and discharge temperature values may help in preventing a cold draft and to ensure a thermal comfort level.

Name	Sound	PS	MCA	WxHxD	Wght
	dBA		A	mm	kg
Área 13	43-46	220V 1ph	3,4	1400×300×700	46
Área 14	39-43	220V 1ph	2,9	1400×300×700	45
Área 15	39-43	220V 1ph	2,3	1000×300×700	35
Área 16	35-42	230V 1ph	6,9	1490×470×1100	95
Área 17	39-43	220V 1ph	2,3	1000×300×700	35
Área 18	43-46	220V 1ph	3,4	1400×300×700	46



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

2.4. UCA 03 RXQ34TATL

Capacity data at conditions and connection ratio (123%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tdis C	Tmp H	Rq HC	Max HC	Tdis H	Airflow
		°C	BTU/h	BTU/h	BTU/h	BTU/h	°C	°C	°C	BTU/h	BTU/h	°C	l/s
Área 28	FXAQ25AVM	27,0 / 50%	n/a	9607	n/a	7159	Auto	16,1	n/a	n/a	n/a	n/a	157
Área 29	FXAQ40AVM	27,0 / 50%	n/a	15440	n/a	11373	Auto	13,7	n/a	n/a	n/a	n/a	203
Área 30	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 31	FXMQ100PAVE	27,0 / 50%	n/a	38372	n/a	27976	Auto	14,5	n/a	n/a	n/a	n/a	533
Área 32	FXZQ40AVM	27,0 / 50%	n/a	15511	n/a	10793	Auto	13,6	n/a	n/a	n/a	n/a	192
Área 33	FXMQ80PAVE	27,0 / 50%	n/a	30865	n/a	22998	Auto	13,8	n/a	n/a	n/a	n/a	417
Área 34	FXMQ100PAVE	27,0 / 50%	n/a	38372	n/a	27976	Auto	14,5	n/a	n/a	n/a	n/a	533
Área 35	FXFSQ63AVM	27,0 / 50%	n/a	24382	n/a	19497	Auto	15,1	n/a	n/a	n/a	n/a	392
Área 36	FXMQ125PAVE	27,0 / 50%	n/a	48082	n/a	34613	Auto	14,3	n/a	n/a	n/a	n/a	650
Área 37	FXZQ50AVM	27,0 / 50%	n/a	19264	n/a	13444	Auto	13,7	n/a	n/a	n/a	n/a	242
Area 38	FXZQ50AVM	27,0 / 50%	n/a	19264	n/a	13444	Auto	13,7	n/a	n/a	n/a	n/a	242
Área 39	FXMQ125PAVE	27,0 / 50%	n/a	48082	n/a	34613	Auto	14,3	n/a	n/a	n/a	n/a	650

Required cooling capacity towards the outdoor unit: 286814BTU/h.
The sum of the required indoor unit capacities is 286814BTU/h for cooling.
However, the outdoor unit selection uses reduced load values for cooling of 229451BTU/h (= -20%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

The calculation shows the peak discharge temperatures (lowest temperature in case of cooling mode / highest temperature in case of heating mode), assuming the indoor unit is running at full load at the given indoor temperature design conditions. In practice the discharge temperature will modulate based on actual capacity requirements and during defrost mode (heating mode).
The analysis of the suction and discharge temperature values may help in preventing a cold draft and to ensure a thermal comfort level.

Name	Sound	PS	MCA	WxHxD	Wght
	dBA		A	mm	kg
Área 28	28,5-35	220V 1ph	0,6	795×290×266	12
Área 29	33,5-37	220V 1ph	0,7	1050×290×269	15
Área 30	35-42	230V 1ph	6,9	1490×470×1100	95
Área 31	39-43	220V 1ph	2,9	1400×300×700	45
Área 32	28-37	220V 1ph	0,4	575×260×575	16
Área 33	39-43	220V 1ph	2,3	1000×300×700	35
Área 34	39-43	220V 1ph	2,9	1400×300×700	45
Área 35	28-38	230V 1ph	0,6	840×256×840	22
Área 36	40-44	220V 1ph	3,4	1400×300×700	45
Área 37	33-43	230V 1ph	0,6	575×260×575	18
Area 38	33-43	230V 1ph	0,6	575×260×575	18
Área 39	40-44	220V 1ph	3,4	1400×300×700	45

2.5. UCA 04 RXQ36TATL

Capacity data at conditions and connection ratio (117%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tdis C	Tmp H	Rq HC	Max HC	Tdis H	Airflow
		°C	BTU/h	BTU/h	BTU/h	BTU/h	°C	°C	°C	BTU/h	BTU/h	°C	l/s
Área 19	FXAQ25AVM	27,0 / 50%	n/a	9607	n/a	7159	Auto	16,1	n/a	n/a	n/a	n/a	157
Área 20	FXAQ40AVM	27,0 / 50%	n/a	15440	n/a	11373	Auto	13,7	n/a	n/a	n/a	n/a	203
Área 21-2	FXMQ140PAVE	27,0 / 50%	n/a	54906	n/a	39577	Auto	14,7	n/a	n/a	n/a	n/a	767
Área 22	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 23	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 24	FXMQ100PAVE	27,0 / 50%	n/a	38372	n/a	27976	Auto	14,5	n/a	n/a	n/a	n/a	533
Área 25	FXMQ125PAVE	27,0 / 50%	n/a	48082	n/a	34613	Auto	14,3	n/a	n/a	n/a	n/a	650
Área 26	FXMQ125PAVE	27,0 / 50%	n/a	48082	n/a	34613	Auto	14,3	n/a	n/a	n/a	n/a	650
Área 27	FXMQ100PAVE	27,0 / 50%	n/a	38372	n/a	27976	Auto	14,5	n/a	n/a	n/a	n/a	533

Required cooling capacity towards the outdoor unit: 384140BTU/h.
The sum of the required indoor unit capacities is 384140BTU/h for cooling.
However, the outdoor unit selection uses reduced load values for cooling of 345726BTU/h (= -10%).
Be aware that unrealistic reductions may lead to reduced comfort levels, different noise levels or increased wear and tear.

The calculation shows the peak discharge temperatures (lowest temperature in case of cooling mode / highest temperature in case of heating mode), assuming the indoor unit is running at full load at the given indoor temperature design conditions. In practice the discharge temperature will modulate based on actual capacity requirements and during defrost mode (heating mode).

The analysis of the suction and discharge temperature values may help in preventing a cold draft and to ensure a thermal comfort level.

Name	Sound	PS	MCA	WxHxD	Wght
	dBA		A	mm	kg
Área 19	28,5-35	220V 1ph	0,6	795×290×266	12
Área 20	33,5-37	220V 1ph	0,7	1050×290×269	15
Área 21-2	43-46	220V 1ph	3,4	1400×300×700	46
Área 22	35-42	230V 1ph	6,9	1490×470×1100	95
Área 23	35-42	230V 1ph	6,9	1490×470×1100	95
Área 24	39-43	220V 1ph	2,9	1400×300×700	45
Área 25	40-44	220V 1ph	3,4	1400×300×700	45
Área 26	40-44	220V 1ph	3,4	1400×300×700	45
Área 27	39-43	220V 1ph	2,9	1400×300×700	45

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

2.6. UCA 05 RXQ48TATL

Capacity data at conditions and connection ratio (117%) as entered

Name	FCU	Tmp C	Rq TC	Max TC	Rq SC	Max SC	Tevap	Tdis C	Tmp H	Rq HC	Max HC	Tdis H	Airflow
		°C	BTU/h	BTU/h	BTU/h	BTU/h	°C	°C	°C	BTU/h	BTU/h	°C	l/s
Área 40	FXMQ80PAVE	27,0 / 50%	n/a	30865	n/a	22998	Auto	13,8	n/a	n/a	n/a	n/a	417
Área 41	FXZQ40AVM	27,0 / 50%	n/a	15511	n/a	10793	Auto	13,6	n/a	n/a	n/a	n/a	192
Área 42	FXMQ140PAVE	27,0 / 50%	n/a	54906	n/a	39577	Auto	14,7	n/a	n/a	n/a	n/a	767
Área 43	FXAQ25AVM	27,0 / 50%	n/a	9607	n/a	7159	Auto	16,1	n/a	n/a	n/a	n/a	157
Área 44	FXAQ40AVM	27,0 / 50%	n/a	15440	n/a	11373	Auto	13,7	n/a	n/a	n/a	n/a	203
Área 45	FXMQ250PVM	27,0 / 50%	n/a	96008	n/a	71310	Auto	14,9	n/a	n/a	n/a	n/a	1400
Área 46	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 47	FXZQ50AVM	27,0 / 50%	n/a	19264	n/a	13444	Auto	13,7	n/a	n/a	n/a	n/a	242
Área 48	FXMQ63PAVE	27,0 / 50%	n/a	24382	n/a	18043	Auto	13,8	n/a	n/a	n/a	n/a	325
Área 49	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 50	FXZQ32AVM	27,0 / 50%	n/a	12284	n/a	7841	Auto	15,8	n/a	n/a	n/a	n/a	167
Área 51	FXMQ200PVM	27,0 / 50%	n/a	76900	n/a	56273	Auto	16,1	n/a	n/a	n/a	n/a	1233
Área 52	FXZQ32AVM	27,0 / 50%	n/a	12284	n/a	7841	Auto	15,8	n/a	n/a	n/a	n/a	167
Área 53	FXMQ63PAVE	27,0 / 50%	n/a	24382	n/a	18043	Auto	13,8	n/a	n/a	n/a	n/a	325

Required cooling capacity towards the outdoor unit: 406660BTU/h.

The calculation shows the peak discharge temperatures (lowest temperature in case of cooling mode / highest temperature in case of heating mode), assuming the indoor unit is running at full load at the given indoor temperature design conditions. In practice the discharge temperature will modulate based on actual capacity requirements and during defrost mode (heating mode).
The analysis of the suction and discharge temperature values may help in preventing a cold draft and to ensure a thermal comfort level.

Name	Sound	PS	MCA	WxHxD	Wght
	dBA		A	mm	kg
Área 40	39-43	220V 1ph	2,3	1000×300×700	35
Área 41	28-37	220V 1ph	0,4	575×260×575	16
Área 42	43-46	220V 1ph	3,4	1400×300×700	46
Área 43	28,5-35	220V 1ph	0,6	795×290×266	12
Área 44	33,5-37	220V 1ph	0,7	1050×290×269	15
Área 45	37-44	220V 1ph	10,1	1490×470×1100	105
Área 46	35-42	230V 1ph	6,9	1490×470×1100	95
Área 47	33-43	230V 1ph	0,6	575×260×575	18
Área 48	38-42	220V 1ph	1,8	1000×300×700	35
Área 49	35-42	230V 1ph	6,9	1490×470×1100	95
Área 50	26-33,5	230V 1ph	0,4	575×260×575	16
Área 51	35-42	230V 1ph	6,9	1490×470×1100	95
Área 52	26-33,5	230V 1ph	0,4	575×260×575	16
Área 53	38-42	220V 1ph	1,8	1000×300×700	35

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
PS Power supply (voltage and phases)
MCA Minimum Circuit Amps
WxHxD WidthxHeightxDepth
Wght Weight of the device

3.2. Outdoor Details

Name	Model	Comb	Tmp C	CC	Rq CC	Tmp H	HC	Rq HC
		%	°C	BTU/h	BTU/h	°C	BTU/h	BTU/h
UCA 01	RXQ54TATL ▼	118	34,0	535143 (-2,9%)	551110			
UCA 02	RXQ24TATL	123	34,0	241416	229451			
UCA 03	RXQ34TATL ▼	117	34,0	338706 (-2%)	345726			
UCA 04	RXQ36TATL ▼	117	34,0	356599 (-12,3%)	406660			
UCA 05	RXQ48TATL ▼	118	34,0	478083 (-12,4%)	545631			

Name	Model	Piping	Refrigerant		
		m	Type	Bse Refr	Ex Refr
				kg	kg
UCA 01	RXQ54TATL	7,5	R410A	31,5	n/a
UCA 02	RXQ24TATL	7,5	R410A	12,6	n/a
UCA 03	RXQ34TATL	7,5	R410A	20,9	n/a
UCA 04	RXQ36TATL	7,5	R410A	21,0	n/a
UCA 05	RXQ48TATL	7,5	R410A	27,3	n/a

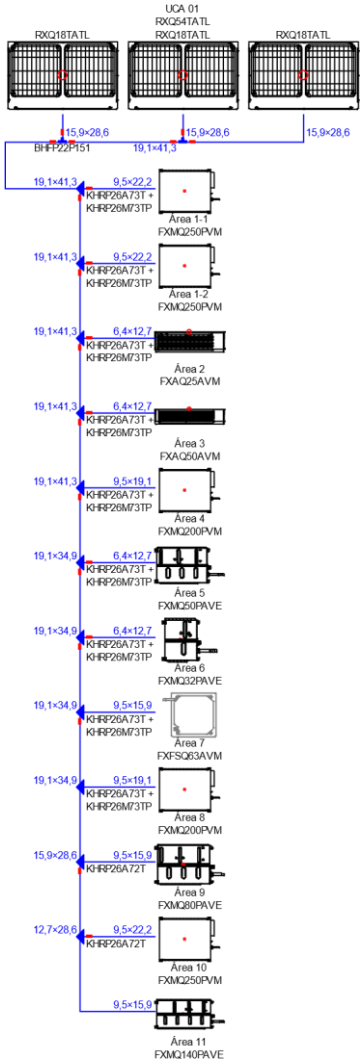
Name	Model	PS	MCA	WxHxD	Wght
			A	mm	kg
UCA 01	RXQ54TATL	220V 3ph			
	× RXQ18TATL		55	1240×1657×765	285
	× RXQ18TATL		55	1240×1657×765	285
	× RXQ18TATL		55	1240×1657×765	285
UCA 02	RXQ24TATL	220V 3ph			
	× RXQ12TATL		43,1	930×1657×765	195
	× RXQ12TATL		43,1	930×1657×765	195
UCA 03	RXQ34TATL	220V 3ph			
	× RXQ18TATL		55	1240×1657×765	285
	× RXQ16TATL		55	1240×1657×765	285
UCA 04	RXQ36TATL	220V 3ph			
	× RXQ18TATL		55	1240×1657×765	285
	× RXQ18TATL		55	1240×1657×765	285
UCA 05	RXQ48TATL	220V 3ph			
	× RXQ18TATL		55	1240×1657×765	285
	× RXQ18TATL		55	1240×1657×765	285
	× RXQ12TATL		43,1	930×1657×765	195

Sufficient distance should be respected between the modules according to the service & operatio space rules as mentioned in the databook.

4. Piping Diagrams

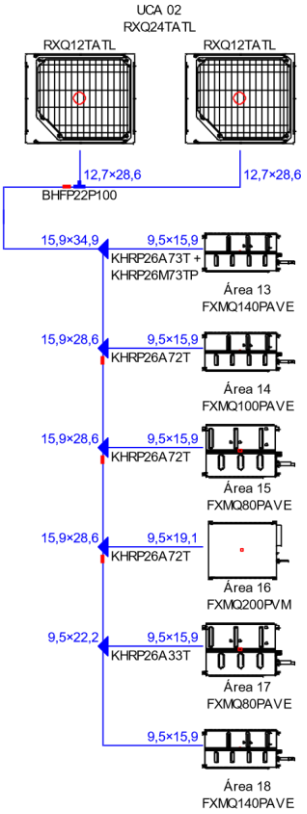
Pipes marked with a short red stripe in the diagrams must be connected to the device with a reducing joint.

4.1. Piping UCA 01



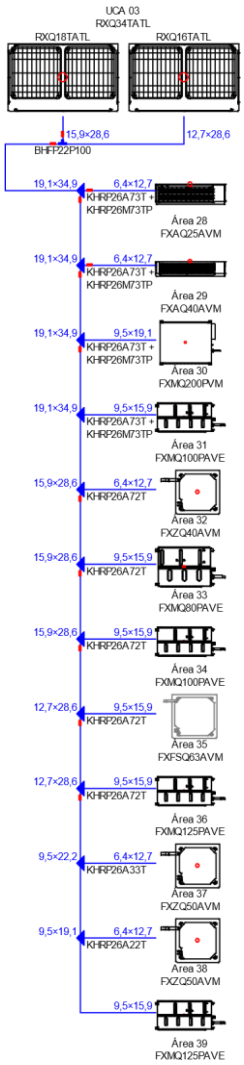
Warning: The pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

4.2. Piping UCA 02



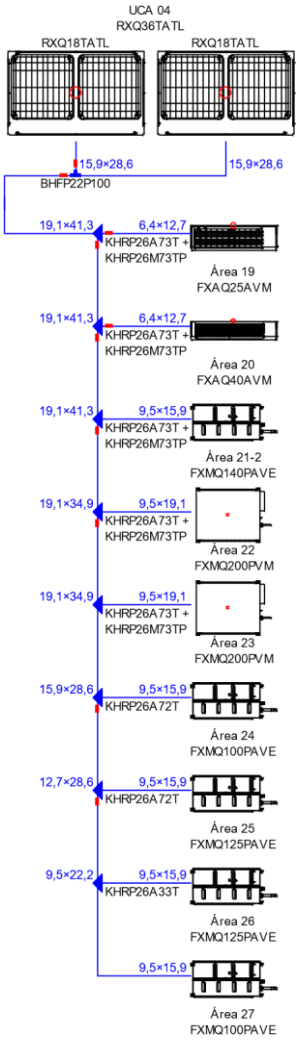
Warning: The pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

4.3. Piping UCA 03



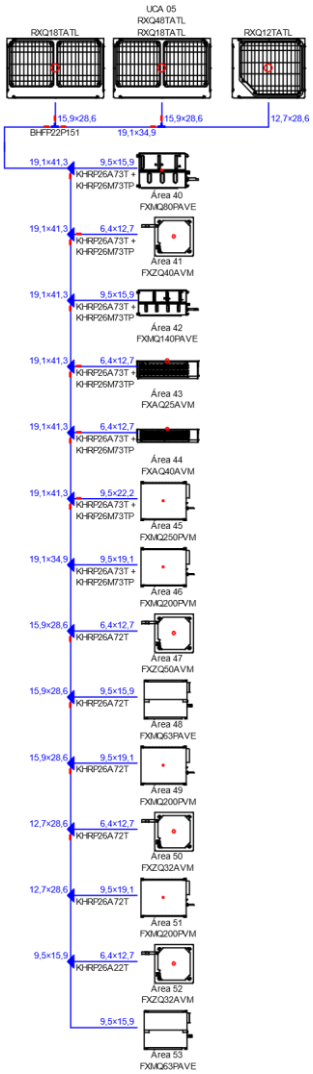
Warning: The pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

4.4. Piping UCA 04



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

4.5. Piping UCA 05

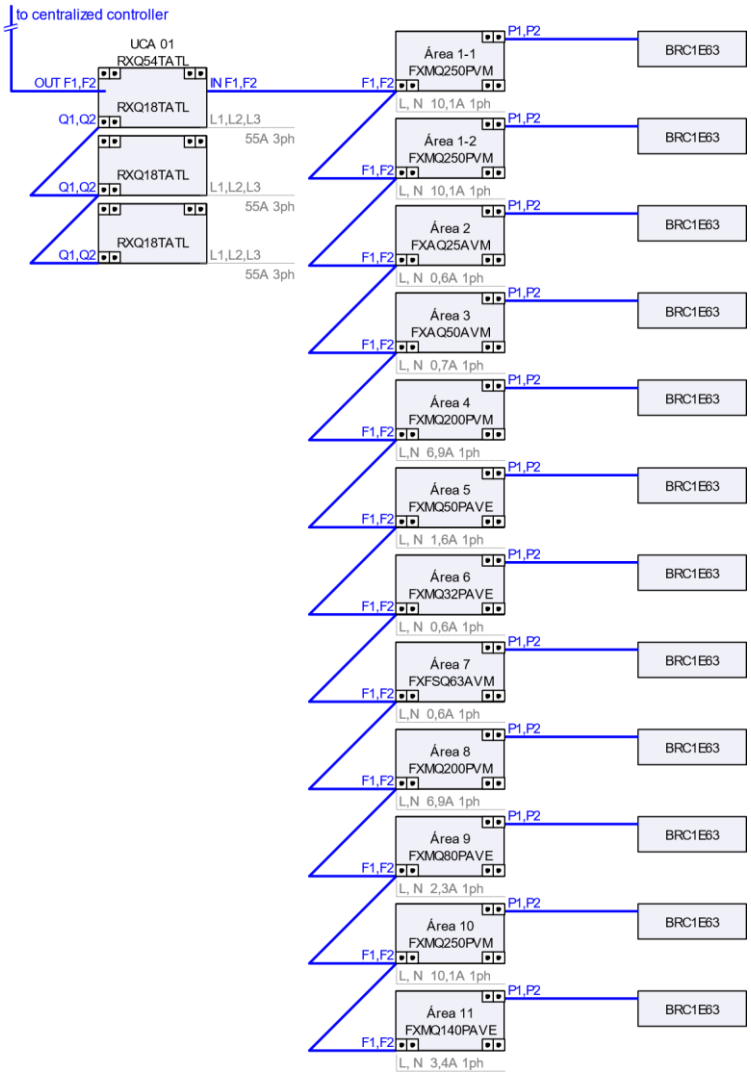


Warning: The pipe diameter values are purely indicative. Depending on the required pipe lengths, a different pipe diameter might be required.

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.

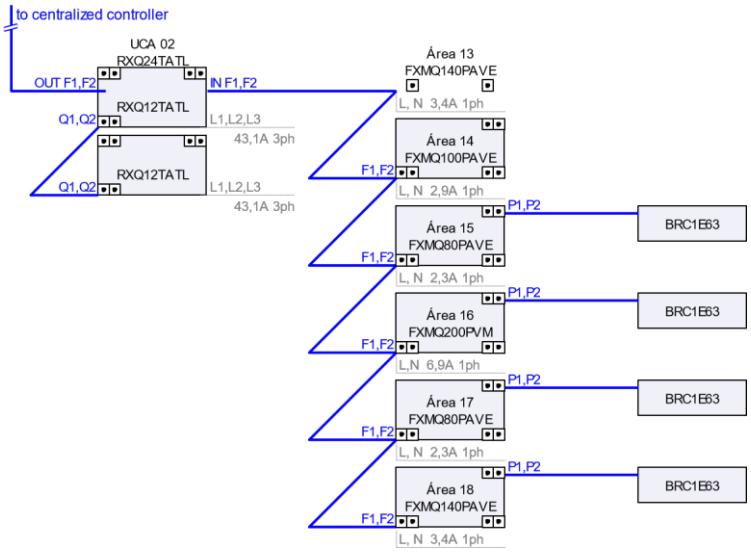
5.1. Wiring UCA 01



F1F2 IN/OUT transmission wiring, use 2-core wires of 0,75 to 1,25 mm² size cables, without shield (but shielded cable can be used if local regulation prescribes it)

Note: The shield should only be earthed at outdoor unit side, not at the indoor units!

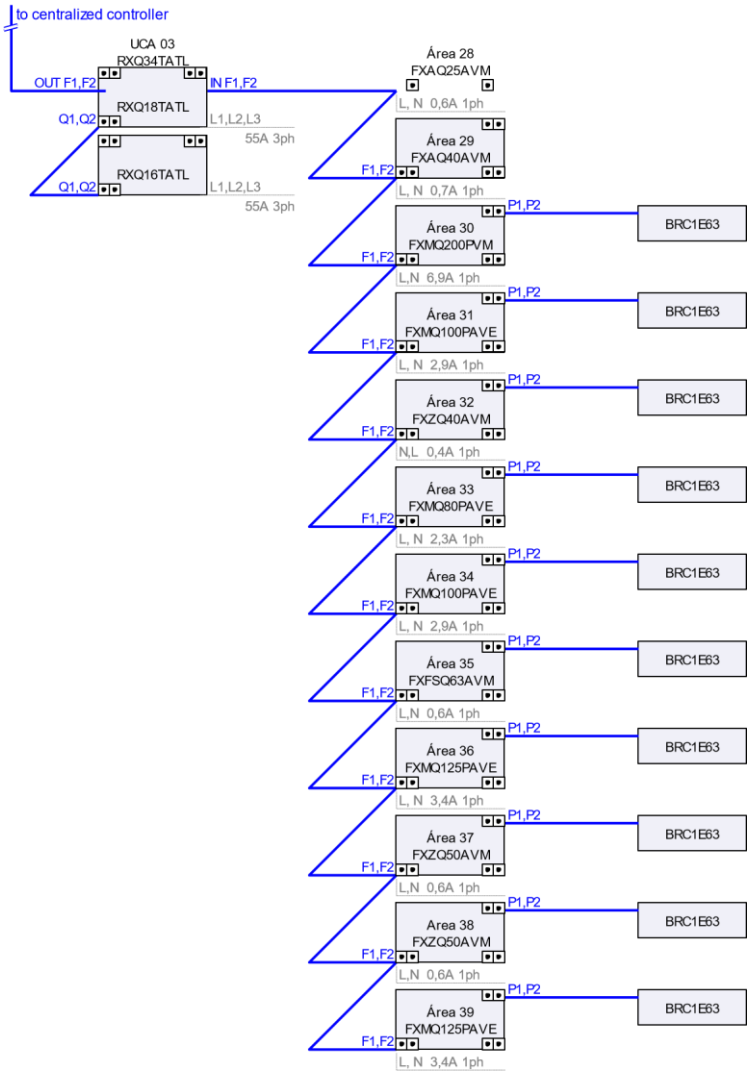
5.2. Wiring UCA 02



F1F2 IN/OUT transmission wiring, use 2-core wires of 0,75 to 1,25 mm² size cables, without shield (but shielded cable can be used if local regulation prescribes it)

Note: The shield should only be earthed at outdoor unit side, not at the indoor units!

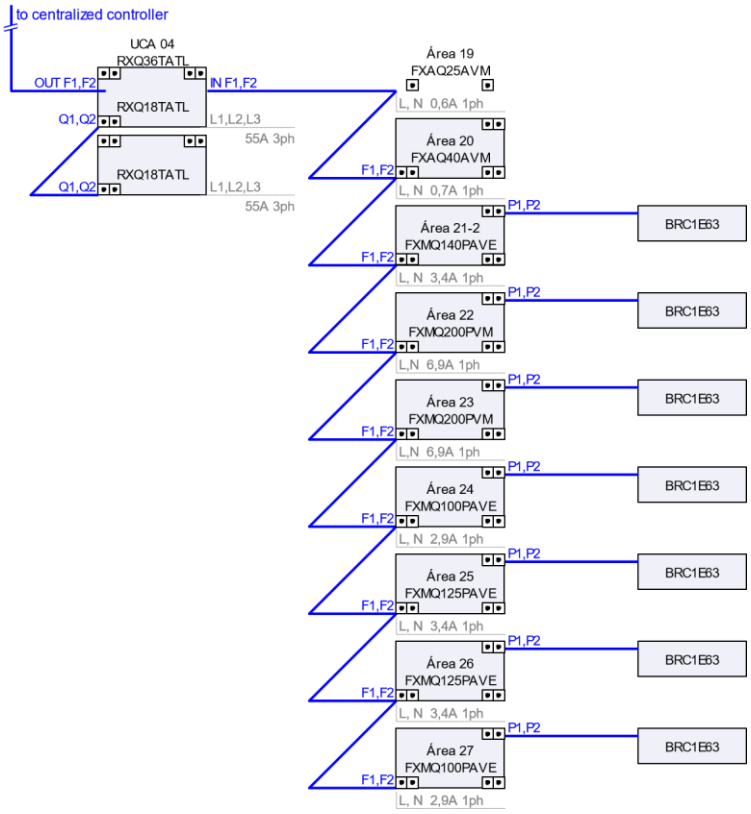
5.3. Wiring UCA 03



F1F2 IN/OUT transmission wiring, use 2-core wires of 0,75 to 1,25 mm² size cables, without shield (but shielded cable can be used if local regulation prescribes it)

Note: The shield should only be earthed at outdoor unit side, not at the indoor units!

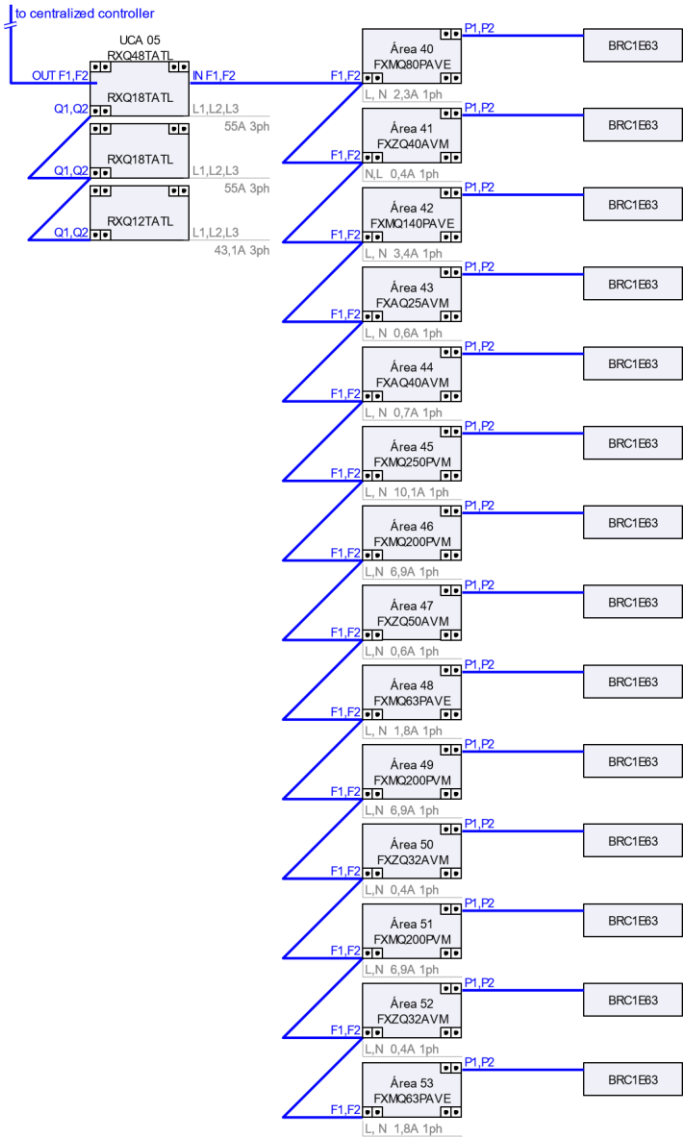
5.4. Wiring UCA 04



F1F2 IN/OUT transmission wiring, use 2-core wires of 0,75 to 1,25 mm² size cables, without shield (but shielded cable can be used if local regulation prescribes it)

Note: The shield should only be earthed at outdoor unit side, not at the indoor units!

5.5. Wiring UCA 05



F1F2 IN/OUT transmission wiring, use 2-core wires of 0,75 to 1,25 mm² size cables, without shield (but shielded cable can be used if local regulation prescribes it)

Note: The shield should only be earthed at outdoor unit side, not at the indoor units!

6. Device Options

6.1. Outdoor Unit Options

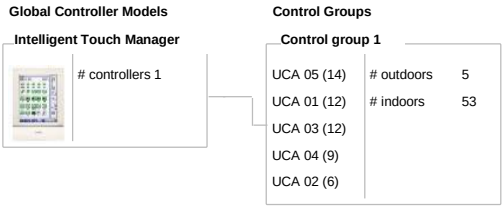
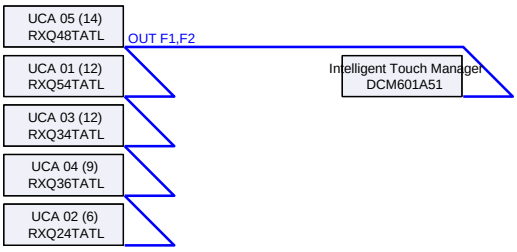
Model	Description	Used by		
BHFP22P151	Outdoor unit multi connection piping kit	UCA 05 [RXQ48TATL]	UCA 01 [RXQ54TATL]	
BHFP22P100	Outdoor unit multi connection piping kit	UCA 04 [RXQ36TATL]	UCA 03 [RXQ34TATL]	UCA 02 [RXQ24TATL]

6.2. Indoor Unit Options

Model	Description	Used by		
BYCQ125EEF	Standard panel with sensing sensor(Fresh white)	Área 7 [FXFSQ63AVM]	Área 35 [FXFSQ63AVM]	
BYFQ60CAW	Grid ceiling panel	Área 32 [FXZQ40AVM]	Área 37 [FXZQ50AVM]	Area 38 [FXZQ50AVM]
		Área 41 [FXZQ40AVM]	Área 47 [FXZQ50AVM]	Área 50 [FXZQ32AVM]
		Área 52 [FXZQ32AVM]		

7. Centralized Controllers

7.1. Concept



7.2. Control group 1