

SAMSUNG

# Project Report

Name : CLH Kft  
Tel. :  
E-mail :  
Address :

Name : Kálmán és Társai Kft  
Tel. :  
E-mail :  
Address :

**Kútvölgyi Kórház**

**2016-07-22**

## 1.1 Kórház

[illegible]

## 2 Piping & Wiring

## 2.1 1.rendszer

### 2.1.1 Detail Load Profile

1) Design condition: Hungary, BUDAPEST, Cooling 35.0/23.9, Heating -15.0/0

## 2) Load profile

Building			Unit		Liquid	Gas	H.P.Gas	Airflow	Nominal Capacity			Simulated Capacity			Combi. Ratio	
Dept	Fl	Room	Name	Model name					Cooling		Heating	Cooling		Heating	Cooling	Heating
									TC	SHC	TC	TC	SHC	TC		
-	-	-	-	-	mm	mm	mm	CMM	kW	kW	kW	kW	kW	kW	%	%
Kórház	7.emelet		1.rendszer	AM120FXVAGH/EU	12.70	28.58		220.00	33.60		37.80	0.00		0.00	102.98	103.97
	6.emelet		K1B68	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B63	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B66	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B67	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B64	AM028FNQDEH/EU	6.35	12.70		7.80	2.80	1.90	3.20	0.00	0.00	0.00		
			K1B65	AM036FNQDEH/EU	6.35	12.70		9.30	3.60	2.40	4.00	0.00	0.00	0.00		
	4.emelet		K1B44	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B43	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B41	AM028FNQDEH/EU	6.35	12.70		7.80	2.80	1.90	3.20	0.00	0.00	0.00		
			K1B42	AM028FNQDEH/EU	6.35	12.70		7.80	2.80	1.90	3.20	0.00	0.00	0.00		
	1.emelet		K1B11	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B12	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	Földszint		K1B01	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K1B02	AM028FNQDEH/EU	6.35	12.70		7.80	2.80	1.90	3.20	0.00	0.00	0.00		

## 2.1.2 Control

1) This data is for reference only. Verify local, state, and national electric codes. Samsung does not guarantee this data.

## 2) Configuration

Building			Unit		Communication wires	Power wires	Breaker Fuse	Main Address		RMC Address		Accessories	
Dept	Fl	Room	Name	Model name								Optional accessories	Basic accessories
-	-	-	-	-	mm2	mm2	A						
Kórház	7.emele t		1.rendszer	AM120FXVAGH/EU	0.75~1.5	~	32						
	6.emele t		K1B68	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		1	3	0	0	MWR-WE10N	MWR-WE10N
			K1B63	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	8	0	0	MWR-WE10N	MWR-WE10N
			K1B64	AM028FNQDEH/EU	0.75~1.50	1.5~2.5		0	9	0	0	MWR-WE10N	MWR-WE10N
			K1B65	AM036FNQDEH/EU	0.75~1.50	1.5~2.5		1	0	0	0	MWR-WE10N	MWR-WE10N
			K1B66	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		1	1	0	0	MWR-WE10N	MWR-WE10N
			K1B67	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		1	2	0	0	MWR-WE10N	MWR-WE10N
	4.emele t		K1B44	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	7	0	0	MWR-WE10N	MWR-WE10N
			K1B41	AM028FNQDEH/EU	0.75~1.50	1.5~2.5		0	4	0	0	MWR-WE10N	MWR-WE10N
			K1B42	AM028FNQDEH/EU	0.75~1.50	1.5~2.5		0	5	0	0	MWR-WE10N	MWR-WE10N
			K1B43	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	6	0	0	MWR-WE10N	MWR-WE10N
			K1B11	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	2	0	0	MWR-WE10N	MWR-WE10N
	1.emele t		K1B12	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	3	0	0	MWR-WE10N	MWR-WE10N
	Földszint		K1B02	AM028FNQDEH/EU	0.75~1.50	1.5~2.5		0	1	0	0	MWR-WE10N	MWR-WE10N
			K1B01	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	0	0	0	MWR-WE10N	MWR-WE10N

2.1.3 Equipment list

1) Equipment list

Categories	Model name		Qty	Categories	Model name		Qty
DVM S(NEW)		AM120FXVAGH/EU	1	NEO FORTE		AM036FNQDEH/EU	1
NEO FORTE		AM022FNQDEH/EU	9	Y-Joint		MXJ-YA2512M	3
		AM028FNQDEH/EU	4			MXJ-YA1509M	10

2) Piping length

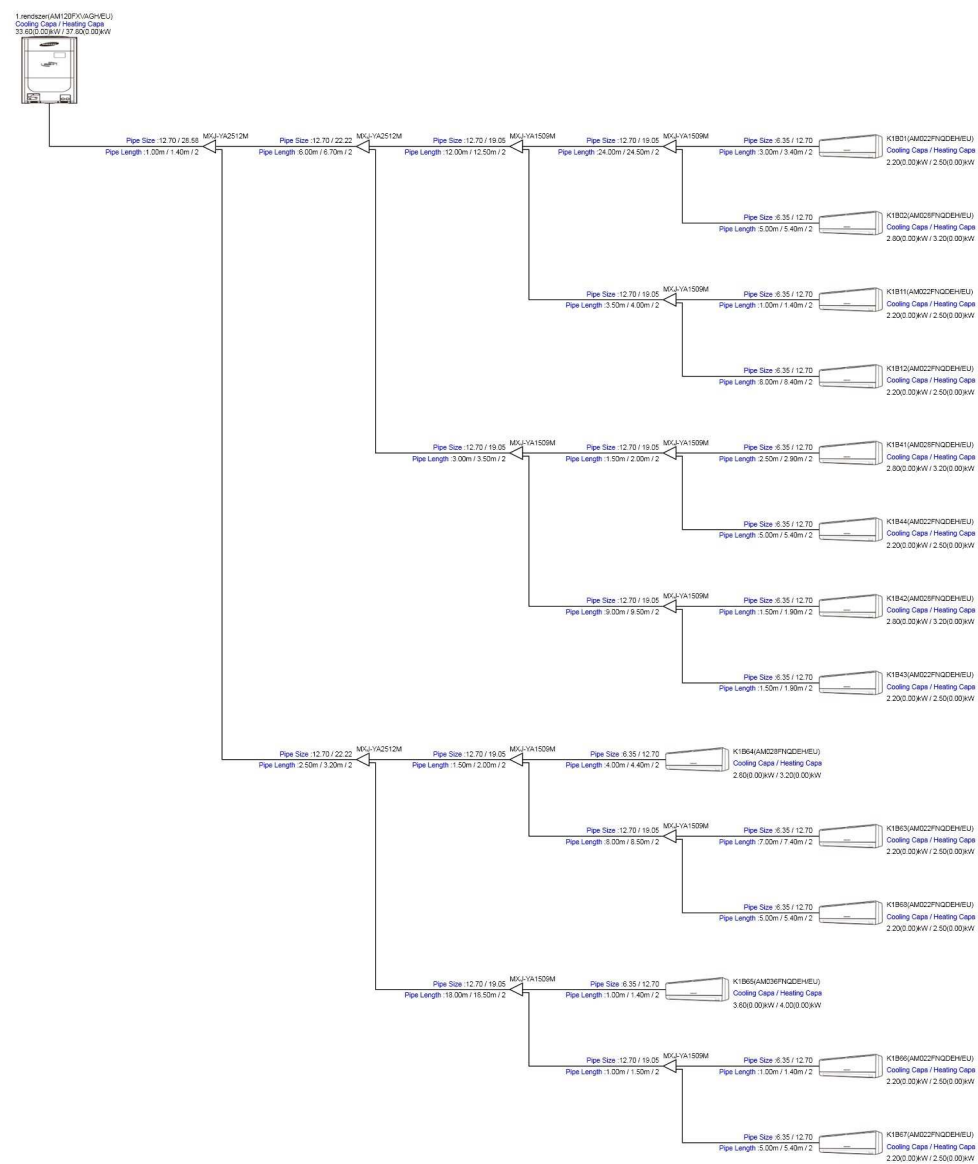
Length as pipe diameter		6.35	9.52	12.70	15.88	19.05	22.22	25.40	28.58	31.75	34.92	38.10	41.28	44.45	47.63	50.80	53.98
1. Liquid piping	m	50.50		91.00													
2. Gas piping	m			50.50		81.50	8.50		1.00								
3. High pressure gas piping	m																
Restriction of pipe length		Restriction (Based on installation manual)						Actual piping length				Equivalent piping length					
1. Total piping length	m	1000.00						145.40									
2. Maximum piping length	m	200.00						49.20				52.50					
3. Main pipe length	m							1.00									
4. Piping length between the first branch and the farthest indoor unit	m	45.00/90.00						48.20									
5. Level difference between outdoor and indoor unit(Max) (OD above ID unit / OD below ID unit)	m	110.00/40.00						10.30									
6. Level difference between indoor units	m	50.00						10.00									

3) Basic and additional charging ref. amount

Basic refrigerant charge amount : 5.500 kg

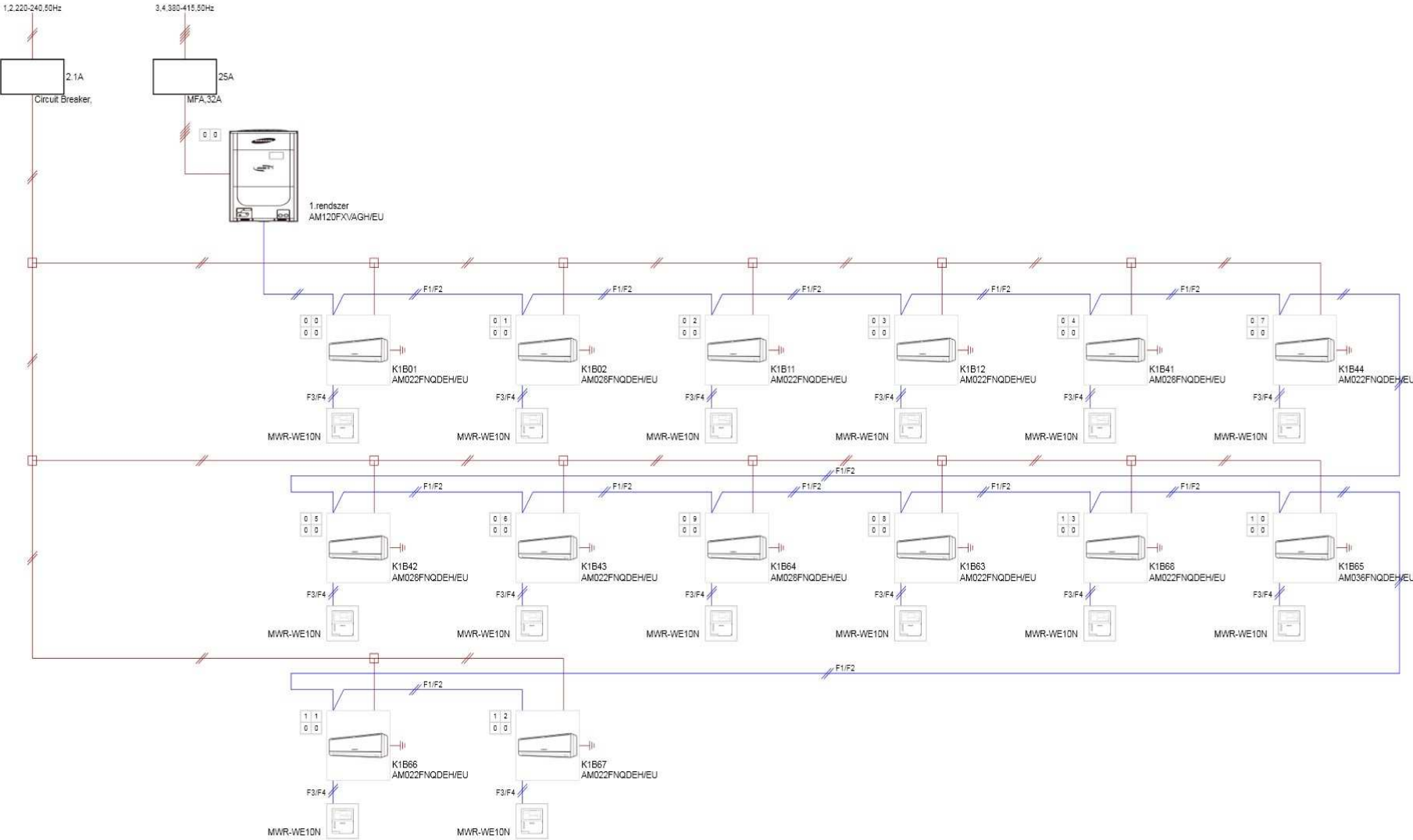
Additional refrigerant amount : 17.630 kg

2.1.4 Piping



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.1.5 Wiring



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.2 2.rendszer

2.2.1 Detail Load Profile

1) Design condition: Hungary, BUDAPEST, Cooling 35.0/23.9, Heating -15.0/0

2) Load profile

Building			Unit		Liquid	Gas	H.P.Gas	Airflow	Nominal Capacity			Simulated Capacity			Combi. Ratio	
Dept	Fl	Room	Name	Model name					Cooling		Heating	Cooling		Heating	Cooling	Heating
									TC	SHC	TC	TC	SHC	TC		
-	-	-	-	-	mm	mm	mm	CMM	kW	kW	kW	kW	kW	kW	%	%
Kórház	7.emelet		2.rendszer	AM100FXVAGH/EU	9.52	22.22		170.00	28.00		31.50	0.00		0.00	122.14	123.49
	6.emelet		K2B64	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B62	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B63	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B61	AM028FNQDEH/EU	6.35	12.70		7.80	2.80	1.90	3.20	0.00	0.00	0.00		
	4.emelet		K2B41	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	3.emelet		K2B36	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B31	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B32	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B33	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B34	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B35	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B71	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	7.emelet		K2B72	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B73	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K2B74	AM028FNQDEH/EU	6.35	12.70		7.80	2.80	1.90	3.20	0.00	0.00	0.00		



2.2.2 Control

1) This data is for reference only. Verify local, state, and national electric codes. Samsung does not guarantee this data.

2) Configuration

Building			Unit		Communication wires	Power wires	Breaker Fuse	Main Address		RMC Address		Accessories	
Dept	Fl	Room	Name	Model name								Optional accessories	Basic accessories
-	-	-	-	-	mm2	mm2	A						
Kórház	7.emele t		2.rendszer	AM100FXVAGH/EU	0.75~1.5	~	32						
	6.emele t		K2B64	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		1	4	0	0	MWR-WE10N	MWR-WE10N
			K2B61	AM028FNQDEH/EU	0.75~1.50	1.5~2.5		1	1	0	0	MWR-WE10N	MWR-WE10N
			K2B62	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		1	0	0	0	MWR-WE10N	MWR-WE10N
			K2B63	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		1	1	0	0	MWR-WE10N	MWR-WE10N
	4.emele t		K2B41	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	8	0	0	MWR-WE10N	MWR-WE10N
	3.emele t		K2B36	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	9	0	0	MWR-WE10N	MWR-WE10N
			K2B31	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	3	0	0	MWR-WE10N	MWR-WE10N
			K2B32	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	4	0	0	MWR-WE10N	MWR-WE10N
			K2B33	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	5	0	0	MWR-WE10N	MWR-WE10N
			K2B34	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	6	0	0	MWR-WE10N	MWR-WE10N
			K2B35	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	7	0	0	MWR-WE10N	MWR-WE10N
			K2B74	AM028FNQDEH/EU	0.75~1.50	1.5~2.5		0	3	0	0	MWR-WE10N	MWR-WE10N
	7.emele t		K2B71	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	0	0	0	MWR-WE10N	MWR-WE10N
			K2B72	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	1	0	0	MWR-WE10N	MWR-WE10N
			K2B73	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	2	0	0	MWR-WE10N	MWR-WE10N

2.2.3 Equipment list

1) Equipment list

Categories	Model name		Qty	Categories	Model name		Qty
DVM S(NEW)		AM100FXVAGH/EU	1	Y-Joint		MXJ-YA2512M	3
NEO FORTE		AM028FNQDEH/EU	2			MXJ-YA1509M	11
		AM022FNQDEH/EU	13				

2) Piping length

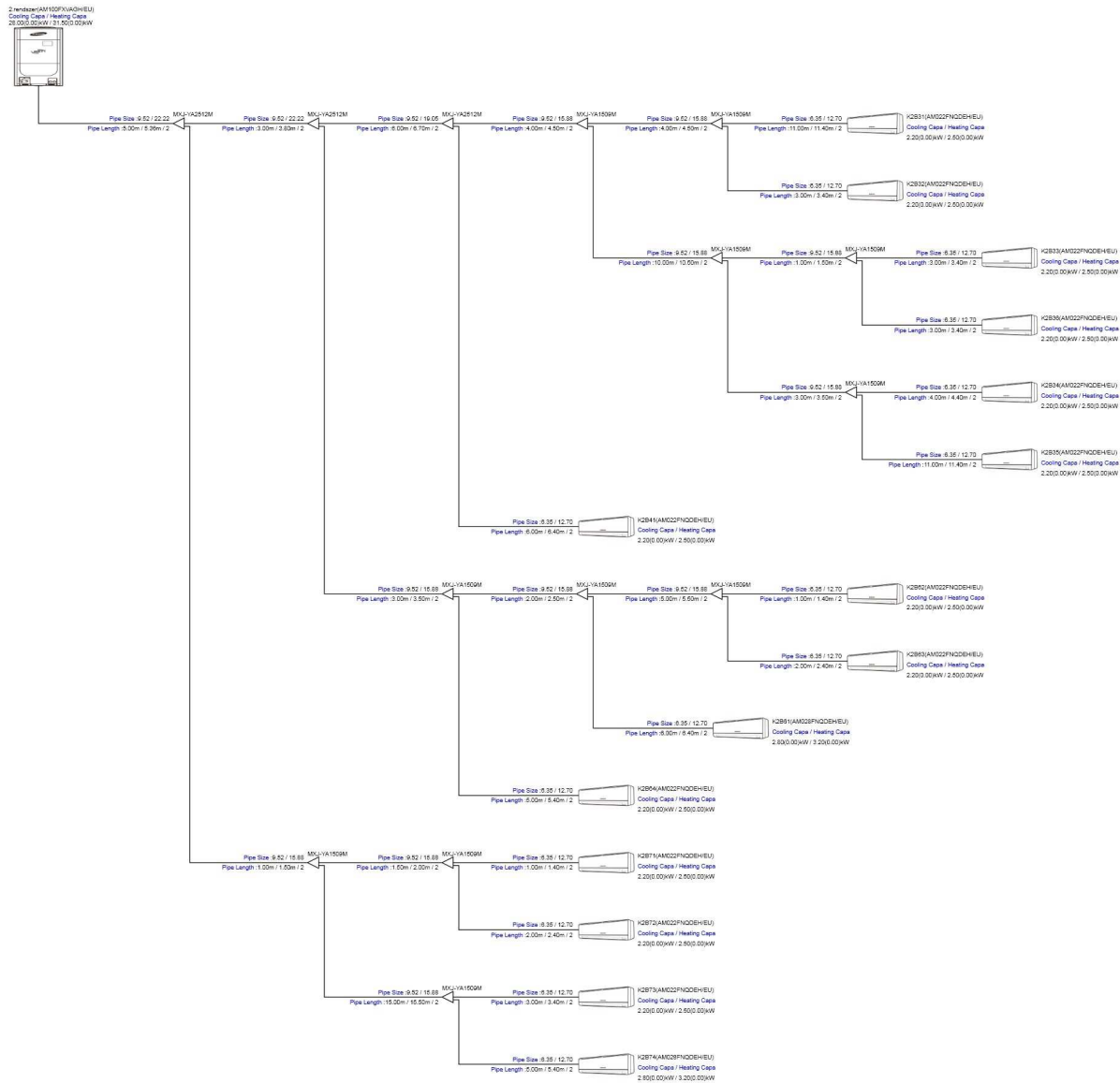
Length as pipe diameter		6.35	9.52	12.70	15.88	19.05	22.22	25.40	28.58	31.75	34.92	38.10	41.28	44.45	47.63	50.80	53.98
1. Liquid piping	m	66.00	63.50														
2. Gas piping	m			66.00	49.50	6.00	8.00										
3. High pressure gas piping	m																
Restriction of pipe length		Restriction (Based on installation manual)						Actual piping length				Equivalent piping length					
1. Total piping length	m	1000.00						133.70									
2. Maximum piping length	m	200.00						43.80				48.76					
3. Main pipe length	m							5.00									
4. Piping length between the first branch and the farthest indoor unit	m	45.00/90.00						38.80									
5. Level difference between outdoor and indoor unit(Max) (OD above ID unit / OD below ID unit)	m	110.00/40.00						4.30									
6. Level difference between indoor units	m	50.00						4.30									

3) Basic and additional charging ref. amount

Basic refrigerant charge amount : 5.200 kg

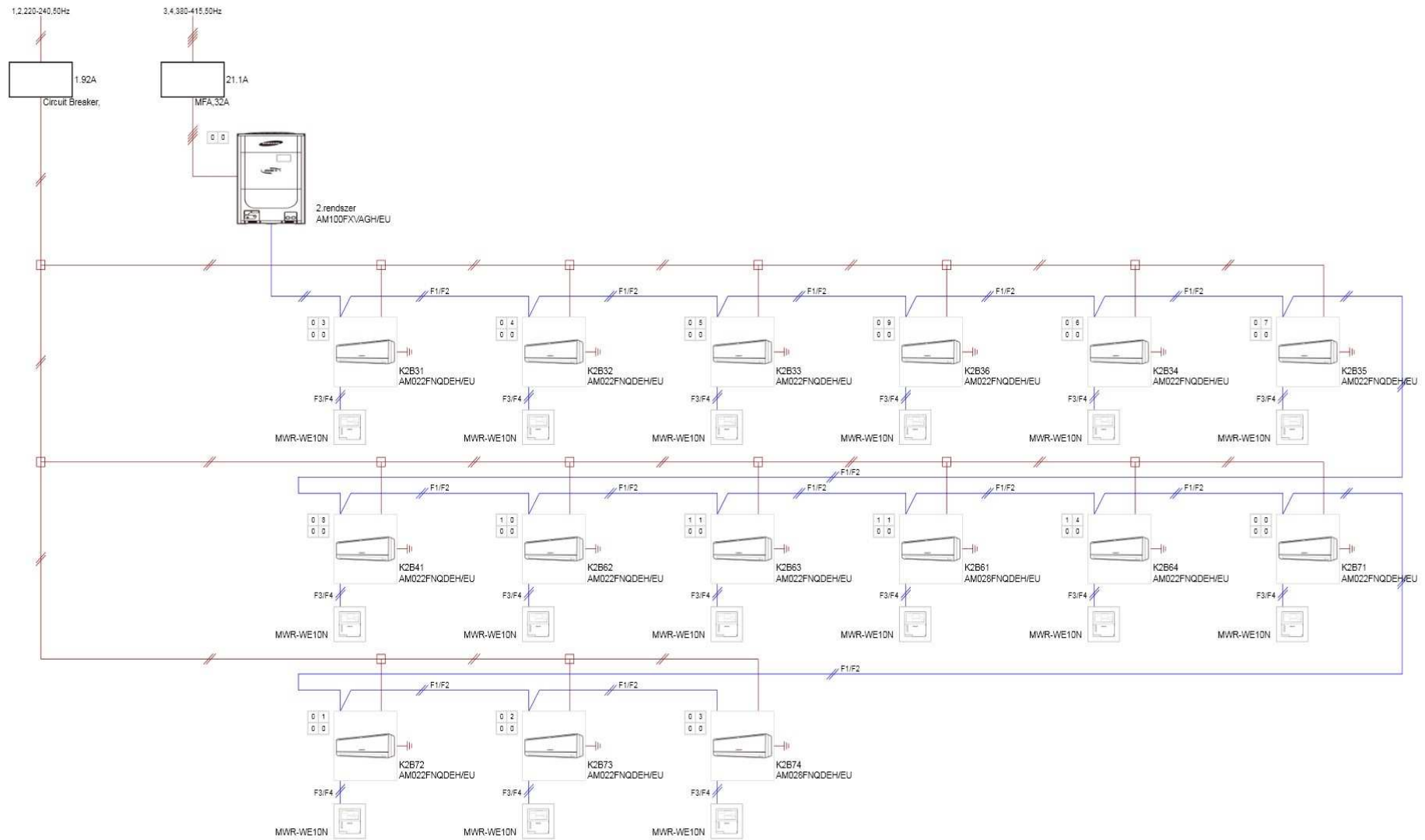
Additional refrigerant amount : 10.480 kg

### 2.2.4 Piping



**- The system configuration may be different from the actual installation conditions, refer to the installation manual.**

## 2.2.5 Wiring



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.3 3.rendszer

2.3.1 Detail Load Profile

- 1) Design condition: Hungary, BUDAPEST, Cooling 35.0/23.9, Heating -15.0/0
- 2) Load profile

Building			Unit		Liquid	Gas	H.P.Gas	Airflow	Nominal Capacity			Simulated Capacity			Combi. Ratio	
Dept	Fl	Room	Name	Model name					Cooling		Heating	Cooling		Heating	Cooling	Heating
									TC	SHC	TC	TC	SHC	TC		
-	-	-	-	-	mm	mm	mm	CMM	kW	kW	kW	kW	kW	kW	%	%
Kórház	Földszint		3.rendszer	AM050FXMDGH/EU	9.52	15.88		100.00	14.00		16.00	0.00		0.00	78.57	78.13
	2.emelet		K3B23	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K3B21	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K3B22	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	1.emelet		K3B11	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	Földszint		K3B01	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		

2.3.2 Control

1) This data is for reference only. Verify local, state, and national electric codes. Samsung does not guarantee this data.

2) Configuration

Building			Unit		Communication wires	Power wires	Breaker Fuse	Main Address		RMC Address		Accessories	
Dept	Fl	Room	Name	Model name								Optional accessories	Basic accessories
-	-	-	-	-	mm2	mm2	A						
Kórház	Földszint		3.rendszer	AM050FXMDGH/EU	0.75~1.5	~	16.1						
	2.emelet		K3B23	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	6	0	0	MWR-WE10N	MWR-WE10N
			K3B21	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	4	0	0	MWR-WE10N	MWR-WE10N
			K3B22	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	5	0	0	MWR-WE10N	MWR-WE10N
	1.emelet		K3B11	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	3	0	0	MWR-WE10N	MWR-WE10N
	Földszint		K3B01	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	0	0	0	MWR-WE10N	MWR-WE10N

2.3.3 Equipment list

1) Equipment list

Categories	Model name		Qty	Categories	Model name		Qty
DVM S Eco(NEW)		AM050FXMDGH/EU	1	Y-Joint		MXJ-YA1509M	4
NEO FORTE		AM022FNQDEH/EU	5				

2) Piping length

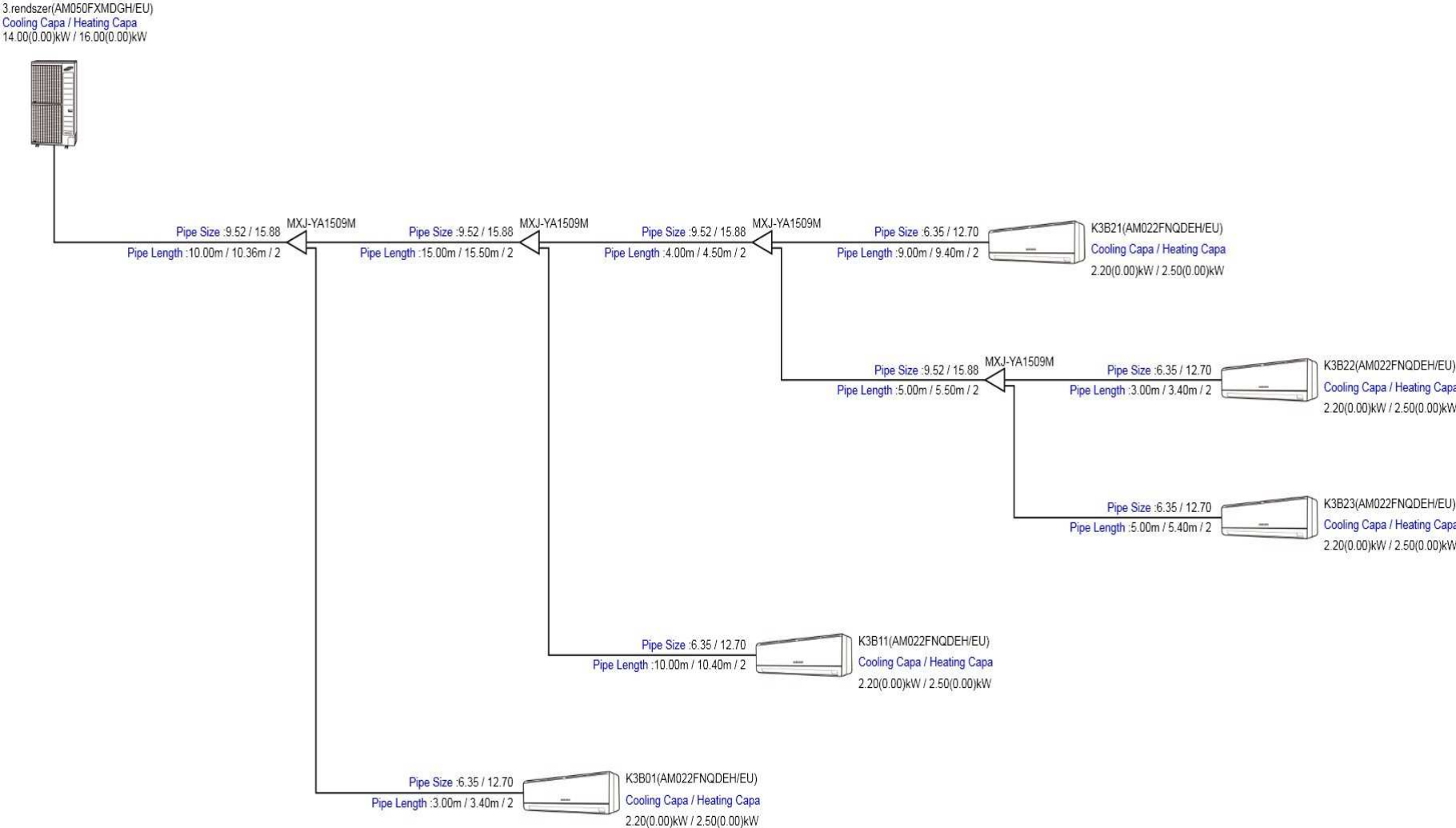
Length as pipe diameter		6.35	9.52	12.70	15.88	19.05	22.22	25.40	28.58	31.75	34.92	38.10	41.28	44.45	47.63	50.80	53.98
1. Liquid piping	m	30.00	34.00														
2. Gas piping	m			30.00	34.00												
3. High pressure gas piping	m																
Restriction of pipe length		Restriction (Based on installation manual)					Actual piping length					Equivalent piping length					
1. Total piping length	m	300.00					65.20					43.26					
2. Maximum piping length	m	150.00					40.20										
3. Main pipe length	m	110.00					10.00										
4. Piping length between the first branch and the farthest indoor unit	m	40.00/0.00					30.20										
5. Level difference between outdoor and indoor unit(Max) (OD above ID unit / OD below ID unit)	m	50.00/40.00					-5.70										
6. Level difference between indoor units	m	15.00					4.00										

3) Basic and additional charging ref. amount

Basic refrigerant charge amount : 3.200 kg

Additional refrigerant amount : 4.410 kg

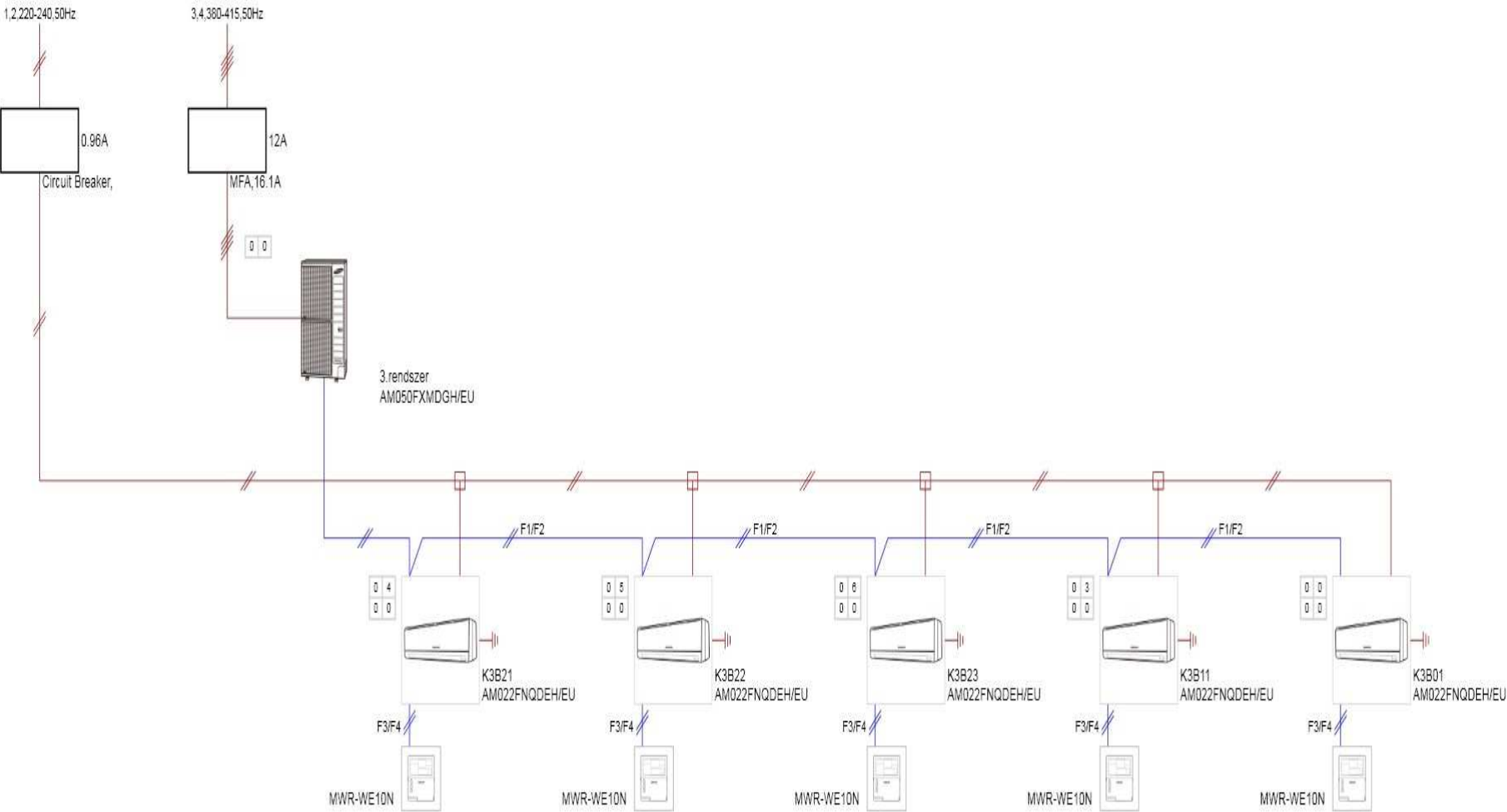
2.3.4 Piping



- The system configuration may be different from the actual installation conditions, refer to the installation manual.



2.3.5 Wiring



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.4 4.rendszer

2.4.1 Detail Load Profile

- 1) Design condition: Hungary, BUDAPEST, Cooling 35.0/23.9, Heating -15.0/0
- 2) Load profile

Building			Unit		Liquid	Gas	H.P.Gas	Airflow	Nominal Capacity			Simulated Capacity			Combi. Ratio	
Dept	Fl	Room	Name	Model name					Cooling		Heating	Cooling		Heating	Cooling	Heating
									TC	SHC	TC	TC	SHC	TC		
-	-	-	-	-	mm	mm	mm	CMM	kW	kW	kW	kW	kW	kW	%	%
Kórház	6.emelet		4.rendszer	AM080FXVAGH/EU	9.52	19.05		170.00	22.40		25.20	0.00		0.00	94.20	93.25
	2.emelet		K4B21	AM036FNQDEH/EU	6.35	12.70		9.30	3.60	2.40	4.00	0.00	0.00	0.00		
			K4B22	AM036FNQDEH/EU	6.35	12.70		9.30	3.60	2.40	4.00	0.00	0.00	0.00		
	1.emelet		K4B11	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K4B14	AM036FNQDEH/EU	6.35	12.70		9.30	3.60	2.40	4.00	0.00	0.00	0.00		
			K4B13	AM036FNQDEH/EU	6.35	12.70		9.30	3.60	2.40	4.00	0.00	0.00	0.00		
			K4B12	AM045FNQDEH/EU	6.35	12.70		11.70	4.50	3.05	5.00	0.00	0.00	0.00		

2.4.2 Control

1) This data is for reference only. Verify local, state, and national electric codes. Samsung does not guarantee this data.

2) Configuration

Building			Unit		Communication wires	Power wires	Breaker Fuse	Main Address		RMC Address		Accessories	
Dept	Fl	Room	Name	Model name								Optional accessories	Basic accessories
-	-	-	-	-	mm2	mm2	A						
Kórház	6.emele t		4.rendszer	AM080FXVAGH/EU	0.75~1.5	~	25						
	2.emele t		K4B21	AM036FNQDEH/EU	0.75~1.50	1.5~2.5		0	4	0	0	MWR-WE10N	MWR-WE10N
			K4B22	AM036FNQDEH/EU	0.75~1.50	1.5~2.5		0	5	0	0	MWR-WE10N	MWR-WE10N
			K4B14	AM036FNQDEH/EU	0.75~1.50	1.5~2.5		0	3	0	0	MWR-WE10N	MWR-WE10N
	1.emele t		K4B11	AM022FNQDEH/EU	0.75~1.50	1.5~2.5		0	0	0	0	MWR-WE10N	MWR-WE10N
			K4B12	AM045FNQDEH/EU	0.75~1.50	1.5~2.5		0	1	0	0	MWR-WE10N	MWR-WE10N
			K4B13	AM036FNQDEH/EU	0.75~1.50	1.5~2.5		0	2	0	0	MWR-WE10N	MWR-WE10N

2.4.3 Equipment list

1) Equipment list

Categories	Model name		Qty	Categories	Model name		Qty
DVM S(NEW)		AM080FXVAGH/EU	1	NEO FORTE		AM045FNQDEH/EU	1
NEO FORTE		AM036FNQDEH/EU	4	Y-Joint		MXJ-YA2512M	1
		AM022FNQDEH/EU	1			MXJ-YA1509M	4

2) Piping length

Length as pipe diameter		6.35	9.52	12.70	15.88	19.05	22.22	25.40	28.58	31.75	34.92	38.10	41.28	44.45	47.63	50.80	53.98
1. Liquid piping	m	20.00	32.00														
2. Gas piping	m			20.00	14.00	18.00											
3. High pressure gas piping	m																
Restriction of pipe length		Restriction (Based on installation manual)						Actual piping length				Equivalent piping length					
1. Total piping length	m	1000.00						53.50									
2. Maximum piping length	m	200.00						33.90				36.26					
3. Main pipe length	m							18.00									
4. Piping length between the first branch and the farthest indoor unit	m	45.00/90.00						15.90									
5. Level difference between outdoor and indoor unit(Max) (OD above ID unit / OD below ID unit)	m	110.00/40.00						6.30									
6. Level difference between indoor units	m	50.00						2.00									

3) Basic and additional charging ref. amount

Basic refrigerant charge amount : 5.500 kg

Additional refrigerant amount : 4.620 kg

2.4.4 Piping

4.rendszer(AM080FXVAGH/EU)  
Cooling Capa / Heating Capa  
22.40(0.00)kW / 25.20(0.00)kW



Pipe Size :9.52 / 19.05  
Pipe Length :18.00m / 18.36m / 2

MXJ-YA2512M

Pipe Size :9.52 / 15.88  
Pipe Length :4.00m / 4.50m / 2

MXJ-YA1509M

Pipe Size :9.52 / 15.88  
Pipe Length :3.00m / 3.50m / 2

MXJ-YA1509M

Pipe Size :6.35 / 12.70  
Pipe Length :4.00m / 4.40m / 2



K4B13(AM036FNQDEH/EU)  
Cooling Capa / Heating Capa  
3.60(0.00)kW / 4.00(0.00)kW

Pipe Size :6.35 / 12.70  
Pipe Length :3.00m / 3.40m / 2



K4B14(AM036FNQDEH/EU)  
Cooling Capa / Heating Capa  
3.60(0.00)kW / 4.00(0.00)kW

Pipe Size :9.52 / 15.88  
Pipe Length :4.00m / 4.50m / 2

MXJ-YA1509M

Pipe Size :6.35 / 12.70  
Pipe Length :7.00m / 7.40m / 2



K4B12(AM045FNQDEH/EU)  
Cooling Capa / Heating Capa  
4.50(0.00)kW / 5.00(0.00)kW

Pipe Size :6.35 / 12.70  
Pipe Length :3.00m / 3.40m / 2



K4B11(AM022FNQDEH/EU)  
Cooling Capa / Heating Capa  
2.20(0.00)kW / 2.50(0.00)kW

Pipe Size :9.52 / 15.88  
Pipe Length :3.00m / 3.50m / 2

MXJ-YA1509M

Pipe Size :6.35 / 12.70  
Pipe Length :1.00m / 1.40m / 2



K4B21(AM036FNQDEH/EU)  
Cooling Capa / Heating Capa  
3.60(0.00)kW / 4.00(0.00)kW

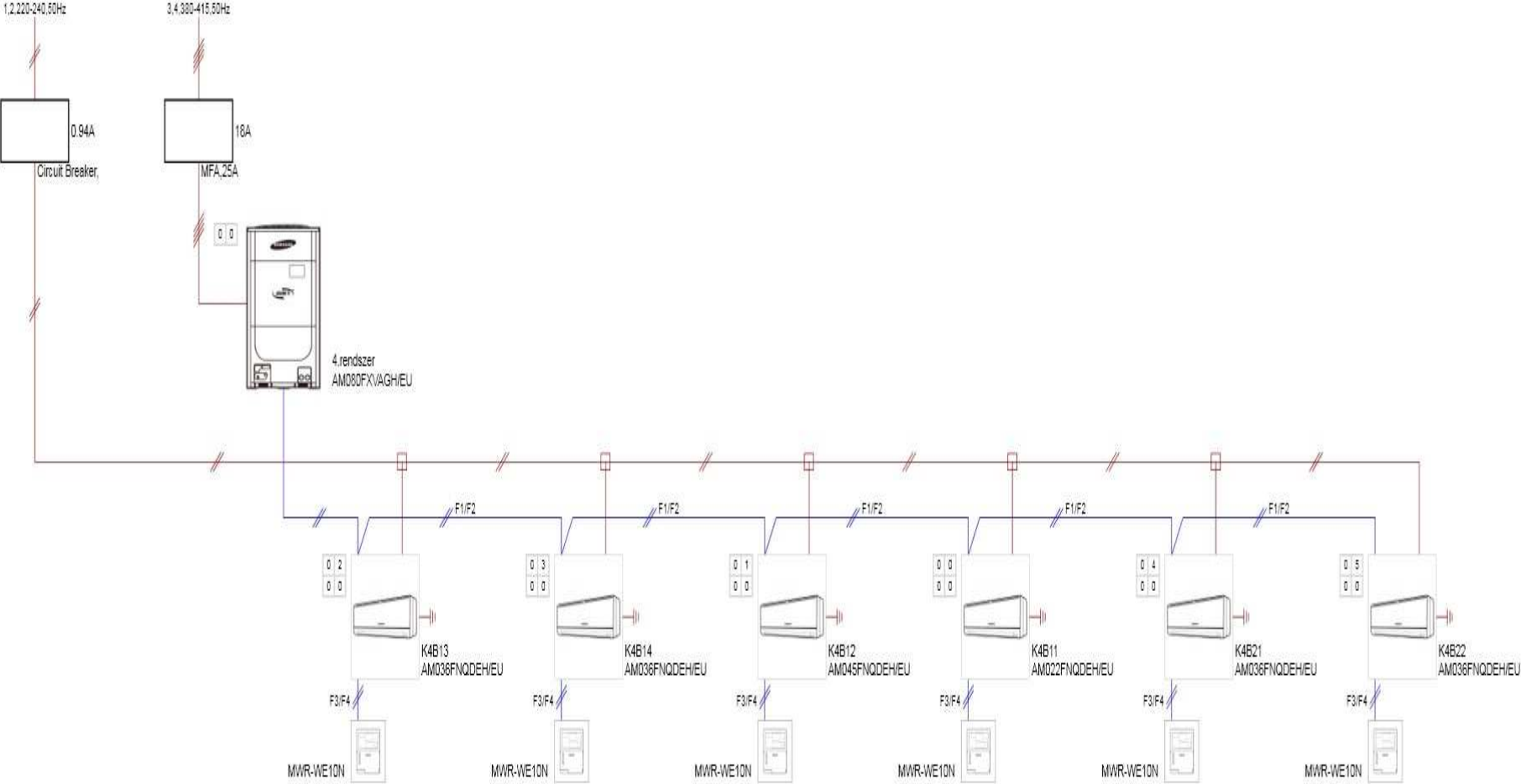
Pipe Size :6.35 / 12.70  
Pipe Length :2.00m / 2.40m / 2



K4B22(AM036FNQDEH/EU)  
Cooling Capa / Heating Capa  
3.60(0.00)kW / 4.00(0.00)kW

- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.4.5 Wiring



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.5 5.rendszer

2.5.1 Detail Load Profile

- 1) Design condition: Hungary, BUDAPEST, Cooling 35.0/23.9, Heating -15.0/0
- 2) Load profile

Building			Unit		Liquid	Gas	H.P.Gas	Airflow	Nominal Capacity			Simulated Capacity			Combi. Ratio	
Dept	Fl	Room	Name	Model name					Cooling		Heating	Cooling		Heating	Cooling	Heating
									TC	SHC	TC	TC	SHC	TC		
-	-	-	-	-	mm	mm	mm	CMM	kW	kW	kW	kW	kW	kW	%	%
Kórház	3.emelet		5.rendszer	AM100FXVAGH/EU	9.52	22.22		170.00	28.00		31.50	0.00		0.00	115.00	115.87
	4.emelet		K5B43	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B41	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B42	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	3.emelet		K5B31	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	2.emelet		K5B32	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B25	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B21	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B22	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B23	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B24	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B14	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
	1.emelet		K5B12	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B13	AM022FNQDEH/EU	6.35	12.70		7.80	2.20	1.50	2.50	0.00	0.00	0.00		
			K5B11	AM036FNQDEH/EU	6.35	12.70		9.30	3.60	2.40	4.00	0.00	0.00	0.00		

### 2.5.2 Control

1) This data is for reference only. Verify local, state, and national electric codes. Samsung does not guarantee this data.

## 2) Configuration

[illegible]



2.5.3 Equipment list

1) Equipment list

Categories	Model name		Qty	Categories	Model name		Qty
DVM S(NEW)		AM100FXVAGH/EU	1	Y-Joint		MXJ-YA2512M	4
NEO FORTE		AM022FNQDEH/EU	13			MXJ-YA1509M	9
		AM036FNQDEH/EU	1				

2) Piping length

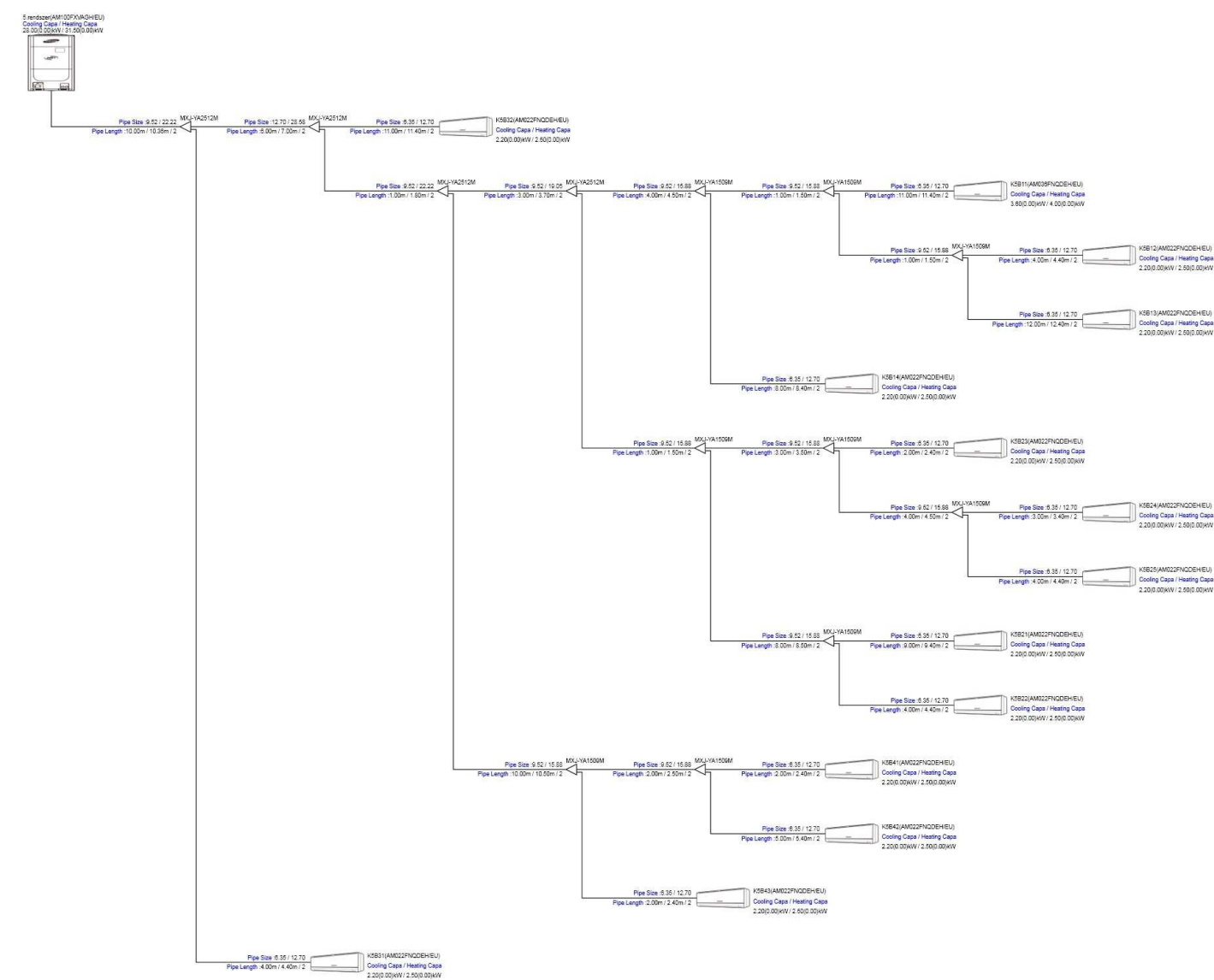
Length as pipe diameter		6.35	9.52	12.70	15.88	19.05	22.22	25.40	28.58	31.75	34.92	38.10	41.28	44.45	47.63	50.80	53.98
1. Liquid piping	m	81.00	48.00	6.00													
2. Gas piping	m			81.00	34.00	3.00	11.00		6.00								
3. High pressure gas piping	m																
Restriction of pipe length		Restriction (Based on installation manual)						Actual piping length				Equivalent piping length					
1. Total piping length	m	1000.00						138.90									
2. Maximum piping length	m	200.00						40.10				46.26					
3. Main pipe length	m							10.00									
4. Piping length between the first branch and the farthest indoor unit	m	45.00/90.00						30.10									
5. Level difference between outdoor and indoor unit(Max) (OD above ID unit / OD below ID unit)	m	110.00/40.00						-3.70									
6. Level difference between indoor units	m	50.00						6.00									

3) Basic and additional charging ref. amount

Basic refrigerant charge amount : 5.200 kg

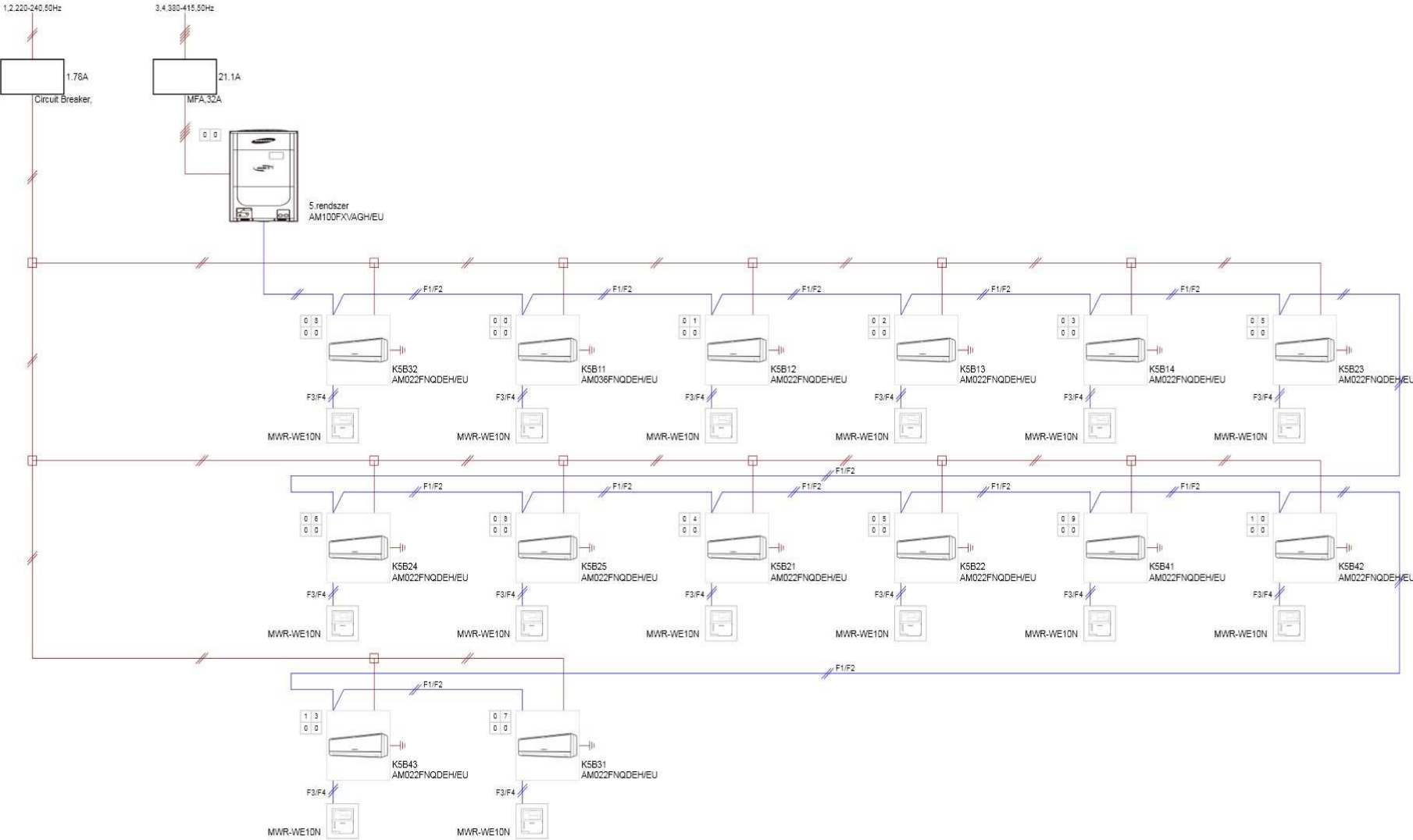
Additional refrigerant amount : 10.260 kg

2.5.4 Piping



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

2.5.5 Wiring



- The system configuration may be different from the actual installation conditions, refer to the installation manual.

# 3 Specification

## 3.1 DVM

### 3.1.1 Outdoor units

Model name				AM050FXMDGH/EU	AM100FXVAGH/EU	AM120FXVAGH/EU
Power supply			Ø, #, V, Hz	3,4,380-415,50Hz	3,4,380-415,50Hz	3,4,380-415,50Hz
Mode			-	HEAT PUMP	HEAT PUMP	HEAT PUMP
Performance	HP/TON		HP/TON	5	10	12
	Capacity(Nominal)	Cooling	kW	14	28	33.6
			Kcal/h	12040	24080	28900
		Cooling 46°C	kW	-	-	-
			Kcal/h	N/A	N/A	N/A
		Heating	kW	16	31.5	37.8
			Kcal/h	13760	27090	32510
	-20 °C	Heating(Low ambient temp.)	kW	-	-	-
			Kcal/h	N/A	N/A	N/A
Power	Power Input(Nominal)	Cooling	kW	3.69	6.8	8.4
		Heating	kW	3.61	6.7	8.7
		Power Input (at specific)		kW	N/A	N/A
	Power Input(Nominal)	Cooling	A	6.2	10.9	13.5
		Heating	A	6	10.7	14
	Max. Current Input		A	12	21.1	25
	Circuit Breaker		A	16.1	32	32
	COP	Cooling	-	3.79	4.12	4.00
Heating		-	4.43	4.70	4.34	
Compressor	Type	-	Twin BLDC Rotaryx1	SSC Scrollx1	SSC Scrollx1	
	Output	kW × n	4.115x1	6.39x1	6.39x1	
Fan	Type	-	Propeller / BLDC	Propeller	Propeller	
	Output	W	125x2	400	400	
	Number of Units	EA	2	1	1	
	Air Flow Rate	CMM	100.00x2	170.00	220.00	
	External Static Pressure	Max.	mmAq	0	8	8
Piping Connections	Liquid Pipe	Ø,mm(in)	9.52(3/8")	9.52(3/8")	12.7(1/2")	
	Gas Pipe	Ø,mm(in)	15.88(5/8")	22.22(7/8")	28.58(1 1/8")	
	Discharge Gas Pipe	Ø,mm(in)	-(-)	-(-)	-(-)	
	Oil Equalizing Pipe	Ø,mm(in)	N/A(N/A)	N/A(N/A)	N/A(N/A)	
Field Wiring	Power Source Wire	mm2	-	-	-	
	Transmission Cable	mm2	0.75/1.5	0.75/1.5	0.75/1.5	
Refrigerant	Type	-	R410A	R410A	R410A	
	Factory Charging	kg	3.200	5.200	5.500	
Sound	Sound pressure	dB(A)	51	58	62	
External Dimension	Net Weight	kg	100.000	184.500	184.500	
	Shipping Weight	kg	105.000	200.500	200.500	
	Net Dimensions (WxHxD)	mm	940.00x1210.00x330.00	880.00x1695.00x765.00	880.00x1695.00x765.00	
	Shipping Dimensions (WxHxD)	mm	995.00x1388.00x426.00	948.00x1887.00x832.00	948.00x1887.00x832.00	
Operating Temp. Range	Cooling	C	-5.00~48.00	-5.00~48.00	-5.00~48.00	
	Heating	C	-20.00~26.00	-25.00~24.00	-25.00~24.00	

Model name			AM080FXVAGH/EU		
Power supply			ø, #, V, Hz	3,4,380-415,50Hz	
Mode			-	HEAT PUMP	
Performance	HP/TON		HP/TON	8	
	Capacity(Nominal)	Cooling	kW	22.4	
			Kcal/h	19260	
		Cooling 46°C	kW	-	
			Kcal/h	N/A	
		Heating	kW	25.2	
			Kcal/h	21670	
	-20 °C	Heating(Low ambient temp.)	kW	-	
			Kcal/h	N/A	
Power	Power Input(Nominal)	Cooling	kW	5	
		Heating	kW	5.1	
	Power Input (at specific)		kW	N/A	
	Power Input(Nominal)	Cooling	A	8	
		Heating	A	8.2	
	Max. Current Input		A	18	
	Circuit Breaker		A	25	
COP	Cooling		-	4.48	
	Heating		-	4.94	
Compressor	Type		-	SSC Scrollx1	
	Output		kW × n	4.96x1	
Fan	Type		-	Propeller	
	Output		W	400	
	Number of Units		EA	1	
	Air Flow Rate		CMM	170.00	
	External Static Pressure	Max.	mmAq	8	
Piping Connections	Liquid Pipe		ø,mm(in)	9.52(3/8")	
	Gas Pipe		ø,mm(in)	19.05(3/4")	
	Discharge Gas Pipe		ø,mm(in)	-(-)	
	Oil Equalizing Pipe		ø,mm(in)	N/A(N/A)	
Field Wiring	Power Source Wire		mm2	-	
	Transmission Cable		mm2	0.75/1.5	
Refrigerant	Type		-	R410A	
	Factory Charging		kg	5.500	
Sound	Sound pressure		dB(A)	57	
External Dimension	Net Weight		kg	184.500	
	Shipping Weight		kg	200.500	
	Net Dimensions (WxHxD)		mm	880.00x1695.00x765.00	
	Shipping Dimensions (WxHxD)		mm	948.00x1887.00x832.00	
Operating Temp. Range	Cooling		C	-5.00~48.00	
	Heating		C	-25.00~24.00	

### 3.1.2 Indoor units

Model				AM022FNQDEH/EU	AM028FNQDEH/EU	AM036FNQDEH/EU	AM045FNQDEH/EU	
Power supply			Ø, #, V, Hz	1,2,220-240,50Hz	1,2,220-240,50Hz	1,2,220-240,50Hz	1,2,220-240,50Hz	
Performance	Capacity(Nominal)	Cooling	kW	2.2	2.8	3.6	4.5	
			Kcal/h	1890	2410	3100	3870	
		Cooling (SHC)	kW	1.5	1.9	2.4	3.05	
			Kcal/h	1290	1630	2060	2620	
		Heating	kW	2.5	3.2	4	5	
			Kcal/h	2150	2750	3440	4300	
Power	Power Input(Nominal)	Cooling	W	25	25	30	40	
		Heating		25	25	30	40	
	Current Input	Cooling	A	0.16	0.16	0.18	0.24	
		Heating		0.16	0.16	0.18	0.24	
Fan	Motor	Type	-	Crossflow Fan	Crossflow Fan	Crossflow Fan	Crossflow Fan	
		Output	W	23	23	23	40	
		Number of unit	EA	1	1	1	1	
	Air Flow Rate	H/M/L (UL)	CMM	7.80/6.80/5.80	7.80/6.80/5.80	9.30/8.30/7.30	11.70/10.20/8.70	
	External Pressure	Min / Std / Max	mmAq	-	-	-	-	
Piping Connections	Liquid Pipe		Ø,mm(in)	6.35(1/4")	6.35(1/4")	6.35(1/4")	6.35(1/4")	
	Gas Pipe		Ø,mm(in)	12.7(1/2")	12.7(1/2")	12.7(1/2")	12.7(1/2")	
	Drain Pipe		Ø,mm	ID 18 HOSE	ID 18 HOSE	ID 18 HOSE	ID 18 HOSE	
Field Wiring	Power Source Wire		mm2	1.5~2.5	1.5~2.5	1.5~2.5	1.5~2.5	
	Transmission Cable		mm2	0.75/1.50	0.75/1.50	0.75/1.50	0.75/1.50	
Refrigerant	Type		-	R410A	R410A	R410A	R410A	
	Control Method		-	EEV INCLUDED	EEV INCLUDED	EEV INCLUDED	EEV INCLUDED	
Sound	Sound pressure	High / Low	dBA	31/26	31/26	37/29	39/34	
Dimensions	Net Weight		kg	8.300	8.300	8.300	13.500	
	Shipping Weight		kg	11.300	11.300	11.300	16.500	
	Net Dimensions (WxHxD)		mm	825.00x285.00x189.00	825.00x285.00x189.00	825.00x285.00x189.00	1065.00x298.00x218.00	
	Shipping Dimensions (WxHxD)		mm	904.00x353.00x263.00	904.00x353.00x263.00	904.00x353.00x263.00	1137.00x377.00x299.00	
Panel Size	Panel model		-					
	Panel Net Weight		kg					
	Shipping Weight		kg					
	Net Dimensions (WxHxD)		mm					
	Shipping Dimensions (WxHxD)		mm					

**4 Controller**

5 Total Equipment List

Index	Model	Qty	Remark(Categories)	Unit Price	Amount
Outdoor unit	AM050FXMDGH/EU	1	DVM S Eco(NEW)	0	0
	AM080FXVAGH/EU	1	DVM S(NEW)	0	0
	AM100FXVAGH/EU	2	DVM S(NEW)	0	0
	AM120FXVAGH/EU	1	DVM S(NEW)	0	0
Indoor unit	AM022FNQDEH/EU	41	NEO FORTE	0	0
	AM028FNQDEH/EU	6	NEO FORTE	0	0
	AM036FNQDEH/EU	6	NEO FORTE	0	0
	AM045FNQDEH/EU	1	NEO FORTE	0	0
Piping	MXJ-YA2512M	11	Y-Joint	0	0
	MXJ-YA1509M	38	Y-Joint	0	0
Optional accessories	MWR-WE10N	54	WIRED REMOTE CONTROLLER	0	0
Ref. Pipe	6.35(1/4")	247.5	m	0	0
	12.70(1/2")	344.5	m	0	0
	19.05(3/4")	108.5	m	0	0
	22.22(7/8")	27.5	m	0	0
	28.58(1 1/8")	7	m	0	0
	9.52(3/8")	177.5	m	0	0
	15.88(5/8")	131.5	m	0	0
Additional Ref. Amount	R410A	47.4	kg	0	0
		Total			0