Application guide
DUCTAIR™ II

• • • Providing indoor climate comfort

DUCTAIR II-AGU-0808-E

DUCTAIR ™II

APPLICATION GUIDE

Ref : DUCTAIR II-AGU-0808-E

Our company's products comply with European standards.

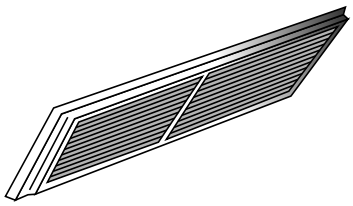
CE

Lennox have been providing environmental solutions since 1895, our range of DUCTAIR™ II reversible chillers continues to meet the standards that have made LENNOX a household name. Flexible design solutions to meet YOUR needs and uncompromising attention to detail. Engineered to last, simple to maintain and Quality that comes as standard. Information on local contacts at www.lennoxeurope.com.

This new range of ducted split system opens up a field of application of air conditioning by using the space above lowered ceilings for location of the indoor unit and air distribution.

Low profile
The low height dimension of the DUCTAIR™ II enables location in almost each type of lowered ceiling.
Height size 12 only 210 mm, size 18 to 48 : 298 mm and size 60 : 320 mm.

Air filter standard factory fitted



Fast and easy installation
Air intake according your needs.

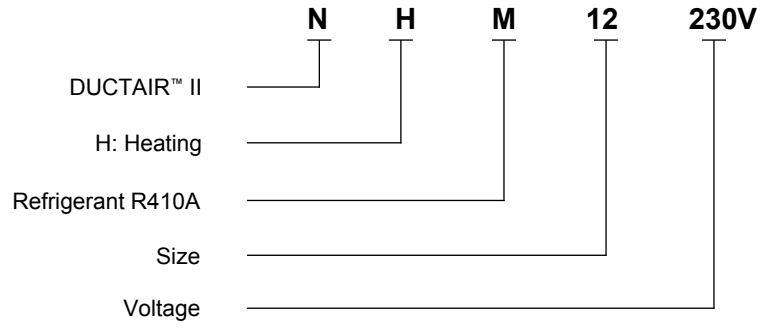
Axial outdoor units
The coil of the outdoor unit is of a L construction, this mean a bigger surface of the coil and low speed running of the axial fan.

Made from electrolytic zinc steel sheet and anti-rust coated components. The units can be used in any climate types. The outdoor unit has also a valve protection cover to protect the valves and prevents water dripping.

Control
Wired or wireless remote controller
The unit will be delivered as standard with a cable operated digital electronic controller, 10 meters wiring included and wireless infrared remote controller..

receiver

EXAMPLES OF UNITS RANGES DESIGNATIONS



NHM 12 230 V: Set
NHM 12 N1: Indoor ductable unit low profile
HM 12 N0: axial Outdoor ductable unit

Model			NHM 12	NHM 18	NHM 24
Power supply		Ph-V-Hz	1,220-240V,50Hz	1,220-240V,50Hz	1,220-240V,50Hz
Cooling	Capacity	kW	3,5	5,4	7,1
	Input	W	1165	1900	2510
	Rated current	A	5,3	8,8	12,2
	EER		3	2,84	2,83
Heating	Capacity	kW	3,8	6	8
	Input	W	1200	1900	2500
	Rated current	A	6,8	8,8	11
	COP		3,17	3,16	3,2
Moisture Removal		l/h	1,2	1,8	2,4
Max. input consumption		W	1950	2300	3300
Max. input current		A	8,9	11,7	15,3
Starting current		A	26	36,8	61
Compressor	Type		ROTARY	ROTARY	ROTARY
Indoor fan motor	Input	W	24,5/30,5/24,3	117/110/101	170/150/133
	Speed (hi/mid/lo)	r/min	940/840/760	900/800/690	1100/1020/900
Indoor air flow (Hi/Mid/Lo)		m^3/h	580/490/420	1160/1100/1050	1460/1400/1350
Indoor external static pressure (Hi)		Pa	40	40	40
Indoor noise level (Hi/Mid/Lo)		dB(A)	41/38/35	45/41/38	49/45/42
Indoor unit	Dimension (W*H*D)	mm	955×385×210	1000×298×800	1000×298×800
	Packing (W*H*D)	mm	1114X469X277	1205×370×940	1205×370×940
	Net/Gross weight	kg	15/19	36/43	38/45
Outdoor coil	Fin type		Hydrophilic aluminium	Hydrophilic aluminium	Hydrophilic aluminium
Outdoor air flow		m^3/h	2100	2400	3000
Outdoor noise level		dB(A)	43	48	55
Outdoor unit	Dimension (W*H*D)	mm	760×590×285	845×695×335	895×860×330
	Packing (W*H*D)	mm	887×655×355	970×770×395	1043×915×395
	Net/ Gross weight	kg	44/48	57/62	68/70
Refrigerant type/Quantity		g	R410A/1120	R410A/2050	R410A/2600
Design pressure (high side/low side)		mPa	4.2/2.5	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm (inch)	6.35 (1/4)	6.35 (1/4)	9.53 (3/8)
	Gas side	mm (inch)	12.7 (1/2)	12.7 (1/2)	16 (5/8)
	Max. pipe length	m	25	25	30
	Max. difference in level		15	15	20
Supply temperature window		°C	17~30	17~30	17~30
Operating limits		°C	-7~45	-7~45	-7~45
Application area		m^2	18~26	34~49	40~56

Notes: 1. Nominal cooling capacities are based on the following conditions: Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB;
2. Nominal heating capacities are based on the following conditions: Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB;
3. Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

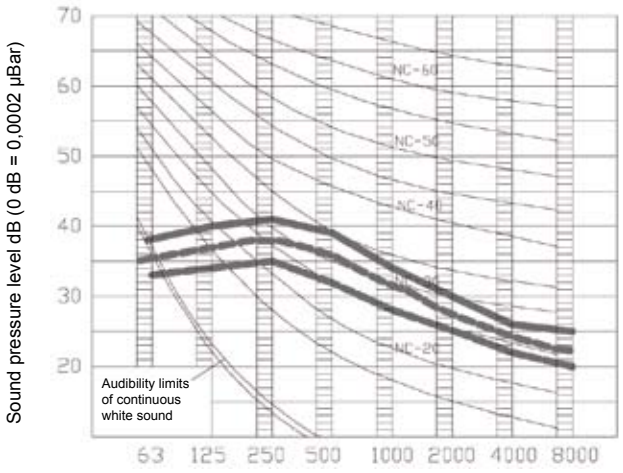
Model			NHM 30	NHM 36
Power supply		Ph-V-Hz	3,380V,50Hz	3,380V,50Hz
Cooling	Capacity	kW	9,2	10,5
	Input	W	3250	3700
	Rated current	A	5,5	6,5
	EER		2,83	2,84
Heating	Capacity	kW	9,5	11,4
	Input	W	3250	3350
	Rated current	A	5,5	5,8
	COP		2,92	3,4
Moisture Removal		l/h	3	3.6
Max. input consumption		W	4620	4620
Max. input current		A	8.5	8.5
Starting current		A	61	61
Compressor	Type		SCROLL	SCROLL
Indoor fan motor	Input	W	118/108/101	118/108/101
Indoor air flow (Hi/Mid/Lo)		m^3/h	2070/1950/1860	2070/1950/1860
Indoor external static pressure (Hi)		Pa	70	70
Indoor noise level (Hi/Mid/Lo)		dB(A)	49/47/44	49/47/44
Indoor unit	Dimension (W*H*D)	mm	1350×298×800	1350×298×800
	Packing (W*H*D)	mm	1555×370×940	1555×370×940
	Net/Gross weight	kg	48/57	48/57
Outdoor coil	Fin type		unhydrophilic aluminium	unhydrophilic aluminium
Outdoor air flow		m^3/h	5000	5000
Outdoor noise level		dB(A)	57	57
Outdoor unit	Dimension (W*H*D)	mm	990×960×360	990×960×360
	Packing (W*H*D)	mm	1120×1090×435	1120×1090×435
	Net/ Gross weight	kg	90/102	90/102
Refrigerant type/Quantity		g	R410A/3100	R410A/3100
Design pressure (high side/low side)		mPa	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	12.7 (1/2)	12.7 (1/2)
	Gas side	mm(inch)	19 (3/4)	19 (3/4)
	Max. pipe length	m	30	30
	Max. difference in level	m	15	20
Supply temperature window		°C	17~30	17~30
Operating limits temp		°C	-7~45	-7~45
Application area		m^2	50~75	60~85

Notes: 1. Nominal cooling capacities are based on the following conditions: Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB;
2. Nominal heating capacities are based on the following conditions: Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB;
3. Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

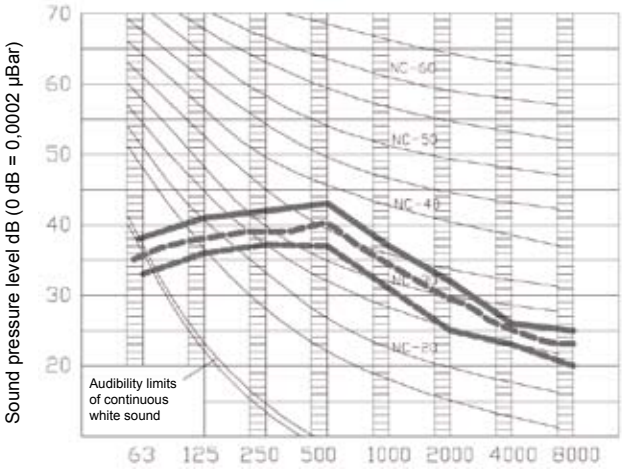
Model			NHM 48	NHM 60
Power supply		Ph-V-Hz	3,380V,50Hz	3,380V,50Hz
Cooling	Capacity	kW	14	17
	Input	W	4700	6000
	Rated current	A	8,2	9,8
	EER		2,98	2,83
Heating	Capacity	kW	15,2	20
	Input	W	4900	6000
	Rated current	A	8,6	9,8
	COP		3,10	3,33
Moisture Removal		l/h	4,6	6
Max. input consumption		W	5870	7500
Max. input current		A	10,7	12,8
Starting current		A	66	67
Compressor	Type		SCROLL	SCROLL
Indoor fan motor	Input	W	118/108/101	324/264/223/186
Indoor air flow (Hi/Mid/Lo)		m^3/h	2400/2300/2200	2800/2700/2600
Indoor external static pressure (Hi)		Pa	70	96
Indoor noise level (Hi/Mid/Lo)		dB(A)	51/47/44	52/48/46
Indoor unit	Dimension (W*H*D)	mm	1350×298×800	1350×320×800
	Packing (W*H*D)	mm	1555×370×940	1555×440×940
	Net/Gross weight	kg	50/59	70/80
Outdoor coil	Fin type		Hydrophilic aluminium	Hydrophilic aluminium
Outdoor air flow		m^3/h	6000	6000
Outdoor noise level		dB(A)	58	58
Outdoor unit	Dimension (W*H*D)	mm	940×1245×340	940×1245×340
	Packing (W*H*D)	mm	1020×1370×435	1020×1370×435
	Net/ Gross weight	kg	112/127	112/127
Refrigerant type/Quantity		g	R410A/4000	R410A/4200
Design pressure (high side/low side)		mPa	4.2/2.5	4.2/2.5
Refrigerant piping	Liquid side	mm(inch)	12.7 (1/2)	12.7 (1/2)
	Gas side	mm(inch)	19 (3/4)	19 (3/4)
	Max. pipe length	m	50	50
	Max. difference in level	m	30	30
Supply temperature window		°C	17~30	17~30
Operating limits temp		°C	-7~45	-7~45
Application area		m^2	80~105	95~120

Notes: 1. Nominal cooling capacities are based on the following conditions: Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB;
2. Nominal heating capacities are based on the following conditions: Indoor temp: 20°CDB; Outdoor temp: 7°CDB, 6°CWB;
3. Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.

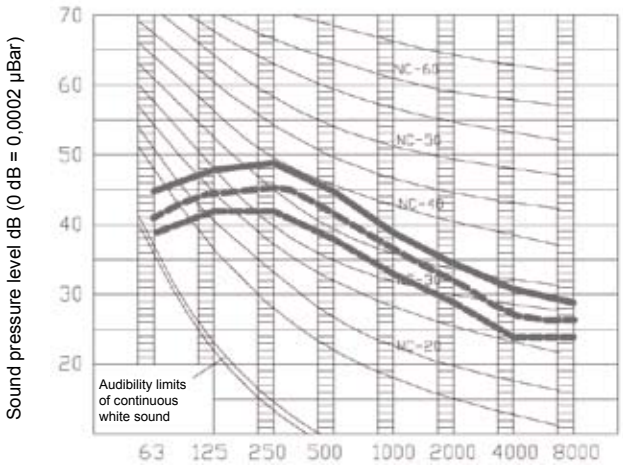
NHM 12



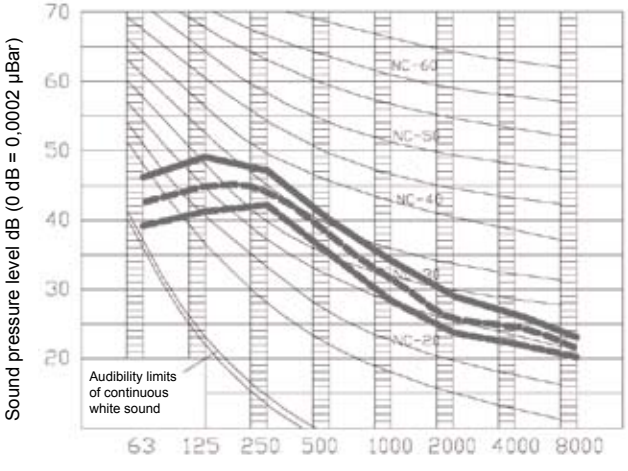
NHM 18



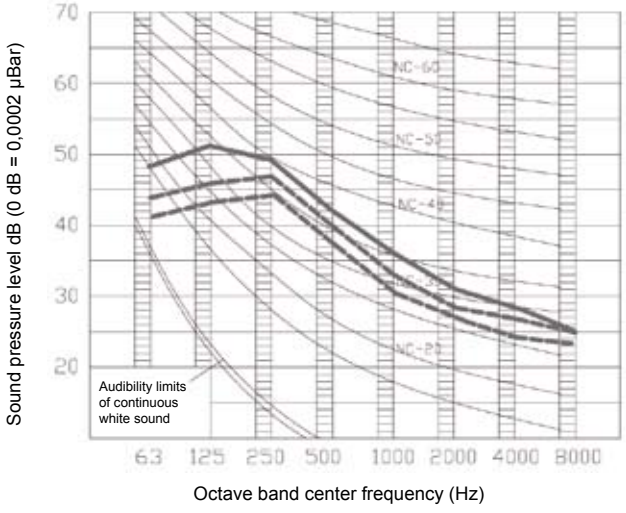
NHM 24



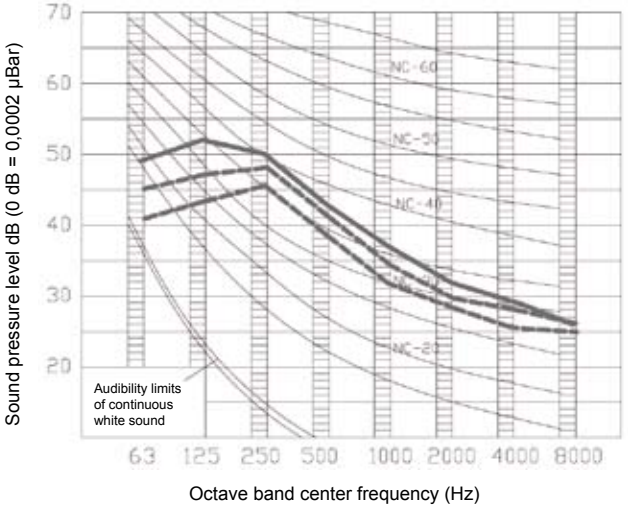
NHM 30-36



NHM 48



NHM 60



———— High speed

- - - - - - - - - - - - - - - - Low speed

Noise level measured at 1 m (blowing)

INDOOR UNIT - CAPACITY TABLE

NHM 12

COOLING			OUTDOOR TEMPERATURE DRY					
Indoor conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	3,38	3,23	3,12	2,94	2,82	2,73
	Sensible capacity	kW	2,7	2,59	2,49	2,35	2,26	2,19
	Input	kW	0,73	0,84	0,94	1,04	1,15	1,25
24ºC D 17ºC W	Total capacity	kW	3,7	3,54	3,41	3,22	3,09	2,99
	Sensible capacity	kW	2,96	2,83	2,73	2,58	2,47	2,4
	Input	kW	0,77	0,88	0,99	1,1	1,21	1,32
27ºC D 19ºC W	Total capacity	kW	4,03	3,85	3,71	3,5	3,36	3,26
	Sensible capacity	kW	3,22	3,08	2,97	2,8	2,69	2,6
	Input	kW	0,81	0,93	1,04	1,16	1,28	1,39
32ºC D 23ºC W	Total capacity	kW	4,63	4,43	4,27	4,03	3,86	3,74
	Sensible capacity	kW	3,7	3,54	3,41	3,22	3,09	2,99
	Input	kW	0,93	1,07	1,2	1,33	1,47	1,6

HEATING			OUTDOOR CONDITIONS						
Indoor conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15ºC	Capacity	kW	6,56	5,24	4,37	3,93	3,71	3,28	3,06
	Input	kW	2,07	1,66	1,38	1,31	1,24	1,17	1,1
18ºC	Capacity	kW	6,16	4,92	4,1	3,69	3,49	3,08	2,87
	Input	kW	1,94	1,56	1,3	1,23	1,17	1,1	1,04
20ºC	Capacity	kW	5,7	4,56	3,8	3,42	3,23	2,85	2,66
	Input	kW	1,8	1,44	1,2	1,14	1,08	1,02	0,96
22ºC	Capacity	kW	5,24	4,2	3,5	3,15	2,97	2,62	2,45
	Input	kW	1,66	1,32	1,1	1,05	0,99	0,94	0,88
27ºC	Capacity	kW	4,56	3,65	3,04	2,74	2,58	2,28	2,13
	Input	kW	1,44	1,15	0,96	0,91	0,86	0,82	0,77

NHM 18

COOLING			OUTDOOR TEMPERATURE DRY					
Indoor Conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	5,22	4,99	4,81	4,54	4,35	4,22
	Sensible capacity	kW	4,17	3,99	3,85	3,63	3,48	3,37
	Input	kW	1,2	1,37	1,54	1,71	1,88	2,05
24ºC D 17ºC W	Total capacity	kW	5,71	5,46	5,27	4,97	4,77	4,62
	Sensible capacity	kW	4,57	4,37	4,21	3,97	3,82	3,7
	Input	kW	1,26	1,44	1,62	1,81	1,99	2,17
27ºC D 19ºC W	Total capacity	kW	6,21	5,94	5,72	5,4	5,18	5,02
	Sensible capacity	kW	4,97	4,75	4,58	4,32	4,15	4,02
	Input	kW	1,33	1,52	1,71	1,9	2,09	2,28
32ºC D 23ºC W	Total capacity	kW	7,14	6,83	6,58	6,21	5,96	5,78
	Sensible capacity	kW	5,71	5,46	5,27	4,97	4,77	4,62
	Input	kW	1,53	1,75	1,97	2,19	2,4	2,62

NHM 18

HEATING			OUTDOOR CONDITIONS						
Indoor conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15ºC	Capacity	kW	10,35	8,28	6,9	6,21	5,87	5,18	4,83
	Input	kW	3,28	2,62	2,19	2,08	1,97	1,86	1,75
18ºC	Capacity	kW	9,72	7,78	6,48	5,83	5,51	4,86	4,54
	Input	kW	3,08	2,46	2,05	1,95	1,85	1,74	1,64
20ºC	Capacity	kW	9	7,2	6	5,4	5,1	4,5	4,2
	Input	kW	2,85	2,28	1,9	1,81	1,71	1,62	1,52
22ºC	Capacity	kW	8,28	6,62	5,52	4,97	4,69	4,14	3,86
	Input	kW	2,62	2,1	1,75	1,66	1,57	1,49	1,4
27ºC	Capacity	kW	7,2	5,76	4,8	4,32	4,08	3,6	3,36
	Input	kW	2,28	1,82	1,52	1,44	1,37	1,29	1,22

NHM 24

COOLING			OUTDOOR TEMPERATURE DRY					
Indoor Conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	6,86	6,56	6,32	5,96	5,73	5,55
	Sensible capacity	kW	5,49	5,25	5,06	4,77	4,58	4,44
	Input	kW	1,58	1,81	2,03	2,26	2,48	2,71
24ºC D 17ºC W	Total capacity	kW	7,51	7,19	6,92	6,53	6,27	6,07
	Sensible capacity	kW	6,01	5,75	5,54	5,23	5,02	4,86
	Input	kW	1,67	1,91	2,15	2,38	2,62	2,86
27ºC D 19ºC W	Total capacity	kW	8,17	7,81	7,53	7,1	6,82	6,6
	Sensible capacity	kW	6,53	6,25	6,02	5,68	5,45	5,28
	Input	kW	1,76	2,01	2,26	2,51	2,76	3,01
32ºC D 23ºC W	Total capacity	kW	9,39	8,98	8,65	8,17	7,84	7,59
	Sensible capacity	kW	7,51	7,19	6,92	6,53	6,27	6,07
	Input	kW	2,02	2,31	2,6	2,89	3,18	3,46

HEATING			OUTDOOR CONDITIONS						
Indoor conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15ºC	Capacity	kW	13,8	11,04	9,2	8,28	7,82	6,9	6,44
	Input	kW	4,31	3,45	2,88	2,73	2,59	2,44	2,3
18ºC	Capacity	kW	12,96	10,37	8,64	7,78	7,34	6,48	6,05
	Input	kW	4,05	3,24	2,7	2,57	2,43	2,3	2,16
20ºC	Capacity	kW	12	9,6	8	7,2	6,8	6	5,6
	Input	kW	3,75	3	2,5	2,38	2,25	2,13	2
22ºC	Capacity	kW	11,04	8,83	7,36	6,62	6,26	5,52	5,15
	Input	kW	3,45	2,76	2,3	2,19	2,07	1,96	1,84
27ºC	Capacity	kW	9,6	7,68	6,4	5,76	5,44	4,8	4,48
	Input	kW	3	2,4	2	1,9	1,8	1,7	1,6

INDOOR UNIT - CAPACITY TABLE

NHM 30

COOLING			OUTDOOR TEMPERATURE DRY					
Indoor Conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	8,89	8,5	8,19	7,73	7,42	7,19
	Sensible capacity	kW	7,11	6,8	6,55	6,18	5,94	5,75
	Input	kW	2,05	2,34	2,63	2,93	3,22	3,51
24ºC D 17ºC W	Total capacity	kW	9,73	9,31	8,97	8,46	8,13	7,87
	Sensible capacity	kW	7,79	7,45	7,18	6,77	6,5	6,3
	Input	kW	2,16	2,47	2,78	3,09	3,4	3,71
27ºC D 19ºC W	Total capacity	kW	10,58	10,12	9,75	9,2	8,83	8,56
	Sensible capacity	kW	8,46	8,1	7,8	7,36	7,07	6,84
	Input	kW	2,28	2,6	2,93	3,25	3,58	3,9
32ºC D 23ºC W	Total capacity	kW	12,17	11,64	11,21	10,58	10,16	9,84
	Sensible capacity	kW	9,73	9,31	8,97	8,46	8,13	7,87
	Input	kW	2,62	2,99	3,36	3,74	4,11	4,49

HEATING			OUTDOOR CONDITIONS						
Indoor conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15°C	Capacity	kW	16,39	13,11	10,93	9,83	9,29	8,19	7,65
	Input	kW	5,61	4,49	3,74	3,55	3,36	3,18	2,99
18°C	Capacity	kW	15,39	12,31	10,26	9,23	8,72	7,7	7,18
	Input	kW	5,27	4,21	3,51	3,33	3,16	2,98	2,81
20°C	Capacity	kW	14,25	11,4	9,5	8,55	8,08	7,13	6,65
	Input	kW	4,88	3,9	3,25	3,09	2,93	2,76	2,6
22°C	Capacity	kW	13,11	10,49	8,74	7,87	7,43	6,56	6,12
	Input	kW	4,49	3,59	2,99	2,84	2,69	2,54	2,39
27°C	Capacity	kW	11,4	9,12	7,6	6,84	6,46	5,7	5,32
	Input	kW	3,9	3,12	2,6	2,47	2,34	2,21	2,08

NHM 36

COOLING			OUTDOOR TEMPERATURE DRY					
Indoor conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	10,14	9,70	9,35	8,82	8,47	8,20
	Sensible capacity	kW	8,11	7,76	7,48	7,06	6,77	6,56
	Input	kW	2,33	2,66	3,00	3,33	3,66	4,00
24ºC D 17ºC W	Total capacity	kW	11,11	10,63	10,24	9,66	9,27	8,98
	Sensible capacity	kW	8,89	8,50	8,19	7,73	7,42	7,19
	Input	kW	2,46	2,81	3,16	3,52	3,87	4,22
27ºC D 19ºC W	Total capacity	kW	12,08	11,55	11,13	10,50	10,08	9,77
	Sensible capacity	kW	9,66	9,24	8,90	8,40	8,06	7,81
	Input	kW	2,59	2,96	3,33	3,70	4,07	4,44
32ºC D 23ºC W	Total capacity	kW	13,89	13,28	12,80	12,08	11,59	11,23
	Sensible capacity	kW	11,11	10,63	10,24	9,66	9,27	8,98
	Input	kW	2,98	3,40	3,83	4,26	4,68	5,11

NHM 36

HEATING			OUTDOOR CONDITIONS						
Indoor conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15ºC	Capacity	kW	20,7	16,56	13,8	12,42	11,73	10,35	9,66
	Input	kW	5,78	4,62	3,85	3,66	3,47	3,27	3,08
18ºC	Capacity	kW	19,44	15,55	12,96	11,66	11,02	9,72	9,07
	Input	kW	5,43	4,34	3,62	3,44	3,26	3,08	2,89
20ºC	Capacity	kW	18	14,4	12	10,8	10,2	9	8,4
	Input	kW	5,03	4,02	3,35	3,18	3,02	2,85	2,68
22ºC	Capacity	kW	16,56	13,25	11,04	9,94	9,38	8,28	7,73
	Input	kW	4,62	3,7	3,08	2,93	2,77	2,62	2,47
27ºC	Capacity	kW	14,4	11,52	9,6	8,64	8,16	7,2	6,72
	Input	kW	4,02	3,22	2,68	2,55	2,41	2,28	2,14

NHM 48

COOLING			OUTDOOR TEMPERATURE DRY					
Indoor conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	13,52	12,94	12,47	11,76	11,29	10,94
	Sensible capacity	kW	10,82	10,35	9,97	9,41	9,03	8,75
	Input	kW	2,96	3,38	3,81	4,23	4,65	5,08
24ºC D 17ºC W	Total capacity	kW	14,81	14,17	13,65	12,88	12,36	11,98
	Sensible capacity	kW	11,85	11,33	10,92	10,3	9,89	9,58
	Input	kW	3,13	3,57	4,02	4,47	4,91	5,36
27ºC D 19ºC W	Total capacity	kW	16,1	15,4	14,84	14	13,44	13,02
	Sensible capacity	kW	12,88	12,32	11,87	11,2	10,75	10,42
	Input	kW	3,29	3,76	4,23	4,7	5,17	5,64
32ºC D 23ºC W	Total capacity	kW	18,52	17,71	17,07	16,1	15,46	14,97
	Sensible capacity	kW	14,81	14,17	13,65	12,88	12,36	11,98
	Input	kW	3,78	4,32	4,86	5,41	5,95	6,49

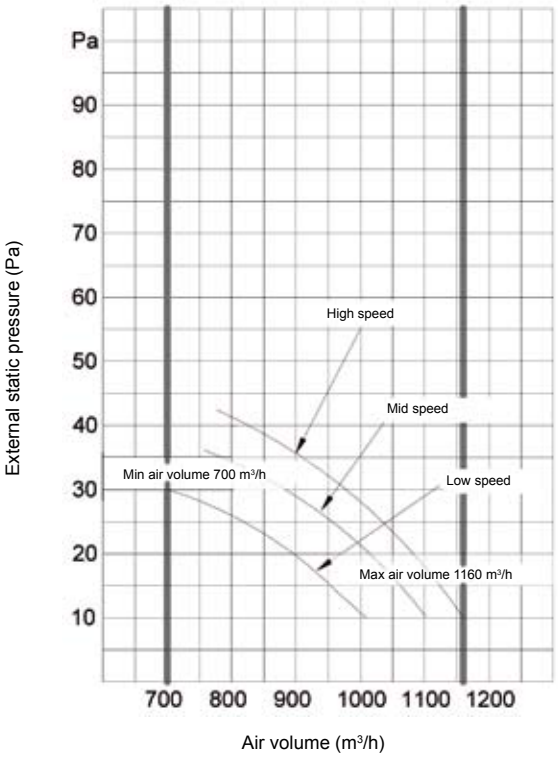
HEATING			OUTDOOR CONDITIONS						
Indoor Conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15ºC	Capacity	kW	26,22	20,98	17,48	15,73	14,86	13,11	12,24
	Input	kW	8,45	6,76	5,64	5,35	5,07	4,79	4,51
18ºC	Capacity	kW	24,62	19,7	16,42	14,77	13,95	12,31	11,49
	Input	kW	7,94	6,35	5,29	5,03	4,76	4,5	4,23
20ºC	Capacity	kW	22,8	18,24	15,2	13,68	12,92	11,4	10,64
	Input	kW	7,35	5,88	4,9	4,66	4,41	4,17	3,92
22ºC	Capacity	kW	20,98	16,78	13,98	12,59	11,89	10,49	9,79
	Input	kW	6,76	5,41	4,51	4,28	4,06	3,83	3,61
27ºC	Capacity	kW	18,24	14,59	12,16	10,94	10,34	9,12	8,51
	Input	kW	5,88	4,7	3,92	3,72	3,53	3,33	3,14

NHM 60

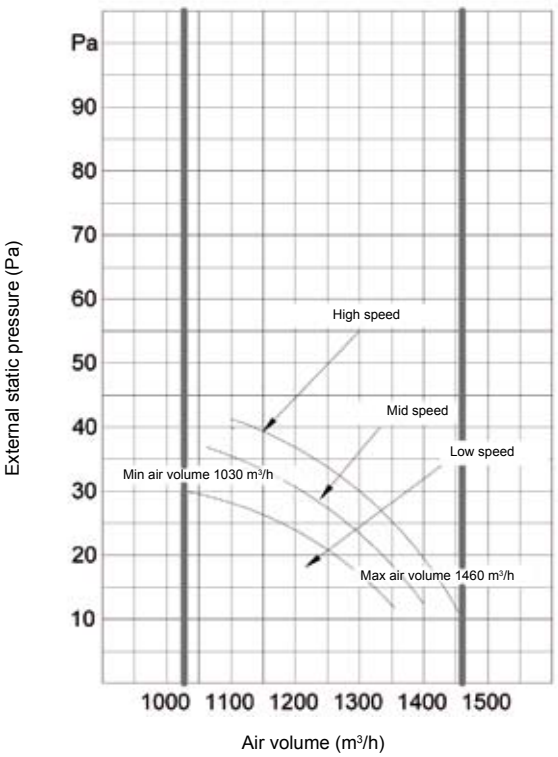
COOLING			OUTDOOR TEMPERATURE DRY					
Indoor conditions			21ºC	25ºC	30ºC	35ºC	40ºC	45ºC
21ºC D 15ºC W	Total capacity	kW	16,42	15,71	15,14	14,28	13,71	13,28
	Sensible capacity	kW	13,14	12,57	12,11	11,42	10,97	10,62
	Input	kW	3,78	4,32	4,86	5,4	5,94	6,48
24ºC D 17ºC W	Total capacity	kW	17,99	17,2	16,58	15,64	15,01	14,55
	Sensible capacity	kW	14,39	13,76	13,26	12,51	12,01	11,64
	Input	kW	3,99	4,56	5,13	5,7	6,27	6,84
27ºC D 19ºC W	Total capacity	kW	19,55	18,7	18,02	17	16,32	15,81
	Sensible capacity	kW	15,64	14,96	14,42	13,6	13,06	12,65
	Input	kW	4,2	4,8	5,4	6	6,6	7,2
32ºC D 23ºC W	Total capacity	kW	22,48	21,51	20,72	19,55	18,77	18,18
	Sensible capacity	kW	17,99	17,2	16,58	15,64	15,01	14,55
	Input	kW	4,83	5,52	6,21	6,9	7,59	8,28

HEATING			OUTDOOR CONDITIONS						
Indoor Conditions			24ºC D 18ºC W	12ºC D 11ºC W	7ºC D 6ºC W	4ºC D 3ºC W	0ºC D -1ºC W	-5ºC D -6ºC W	-7ºC D -8ºC W
15ºC	Capacity	kW	34,5	27,6	23	20,7	19,55	17,25	16,1
	Input	kW	10,35	8,28	6,9	6,56	6,21	5,87	5,52
18ºC	Capacity	kW	32,4	25,92	21,6	19,44	18,36	16,2	15,12
	Input	kW	9,72	7,78	6,48	6,16	5,83	5,51	5,18
20ºC	Capacity	kW	30	24	20	18	17	15	14
	Input	kW	9	7,2	6	5,7	5,4	5,1	4,8
22ºC	Capacity	kW	27,6	22,08	18,4	16,56	15,64	13,8	12,88
	Input	kW	8,28	6,62	5,52	5,24	4,97	4,69	4,42
27ºC	Capacity	kW	24	19,2	16	14,4	13,6	12	11,2
	Input	kW	7,2	5,76	4,8	4,56	4,32	4,08	3,84

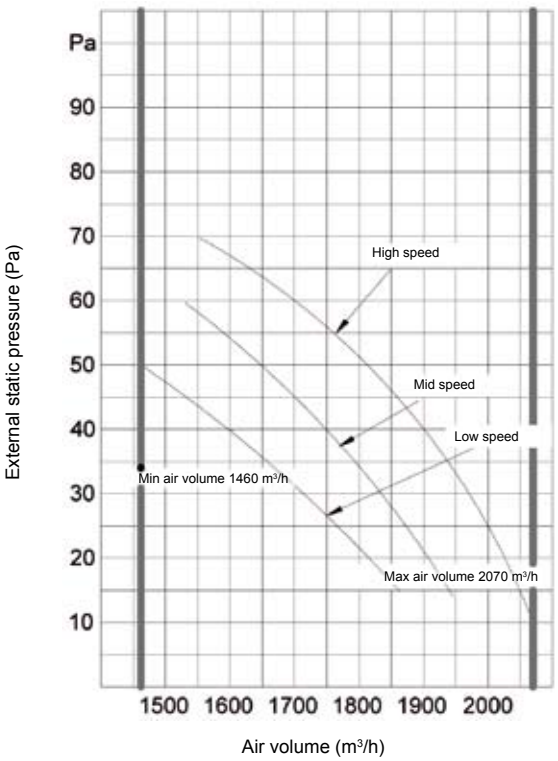
NHM 18



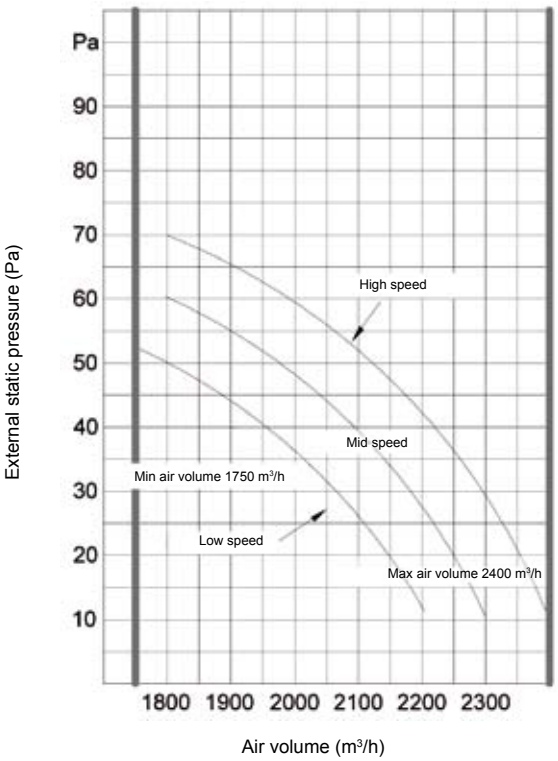
NHM 24



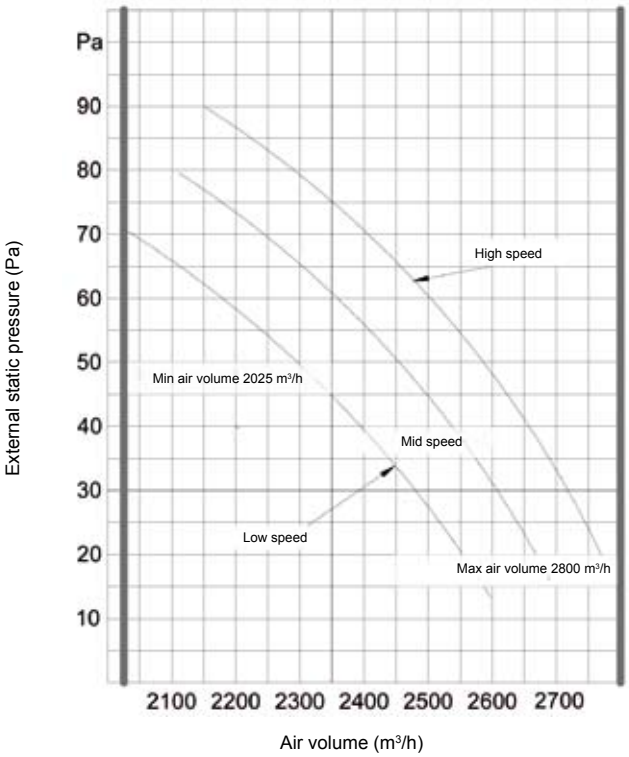
NHM 30&36



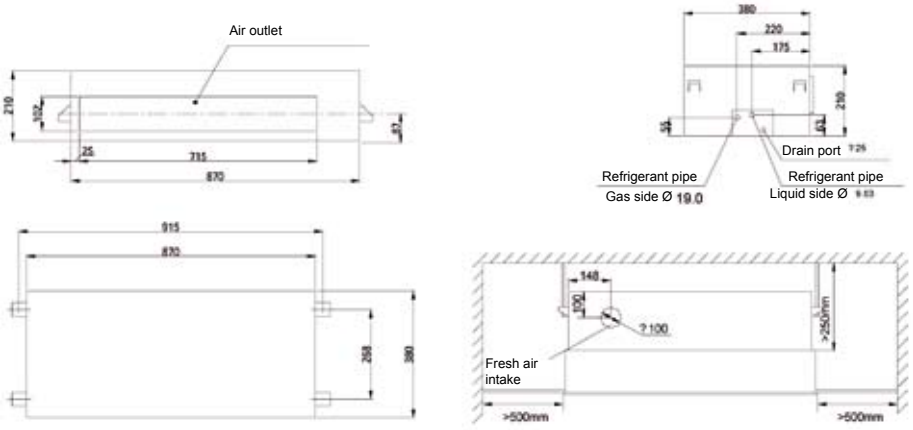
NHM 48



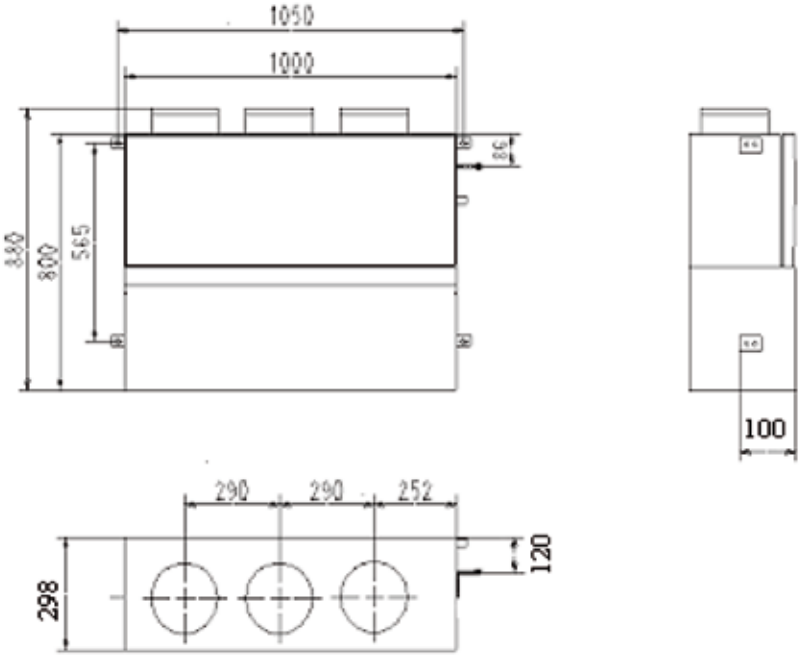
NHM 60


Pa
90
80
70
60
50
40
30
20
10
External static pressure (Pa)
High speed
Min air volume 2025 m³/h
Mid speed
Low speed
Max air volume 2800 m³/h
2100 2200 2300 2400 2500 2600 2700
Air volume (m³/h)

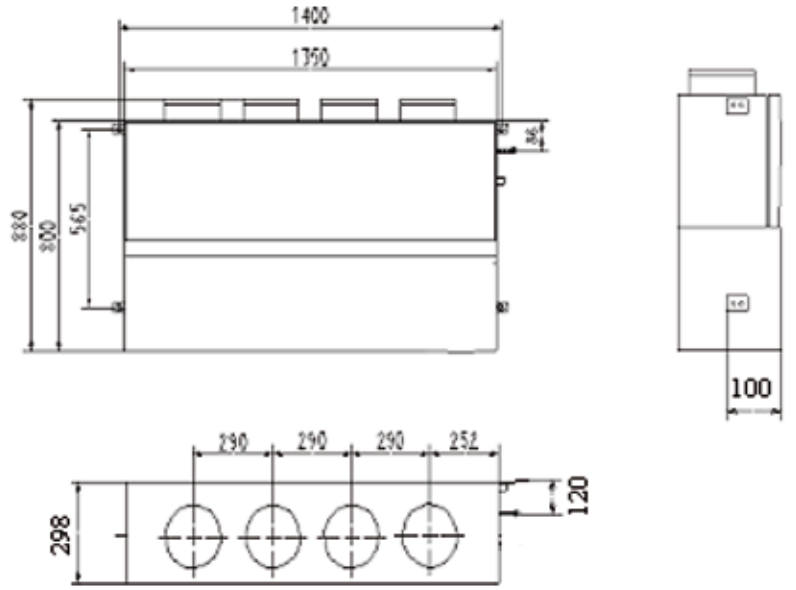
NHM 12



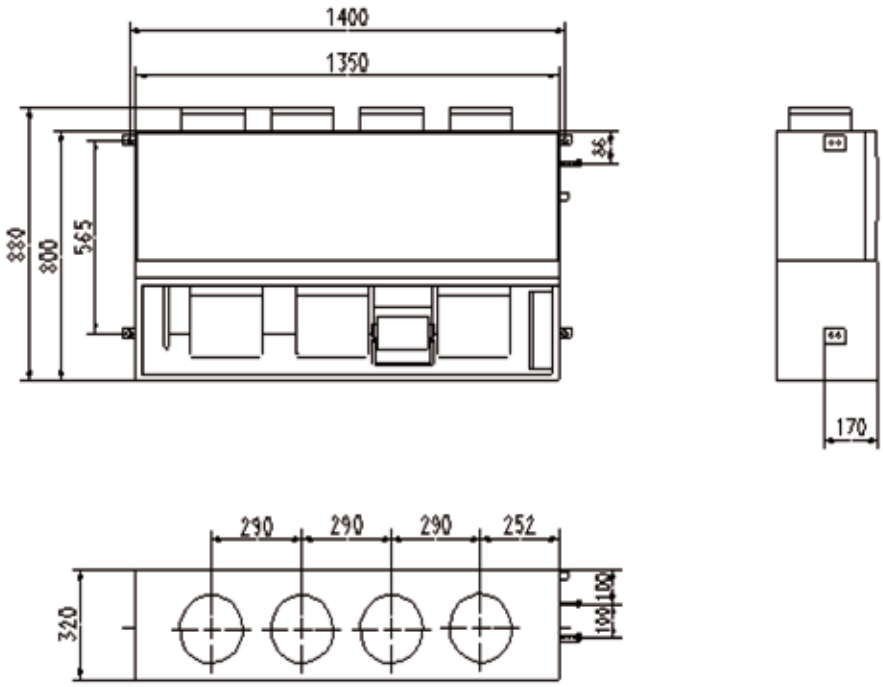
NHM 18 & 24



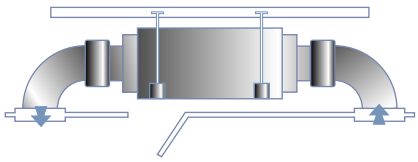
NHM 30, 36 & 48



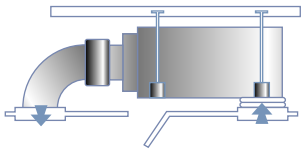
NHM 60



Way of air intake and inserting air filter:
Air intake can be positioned either at the back or below the unit. Similarly, the air filter also can be inserted either from the back or from the bottom of the unit.

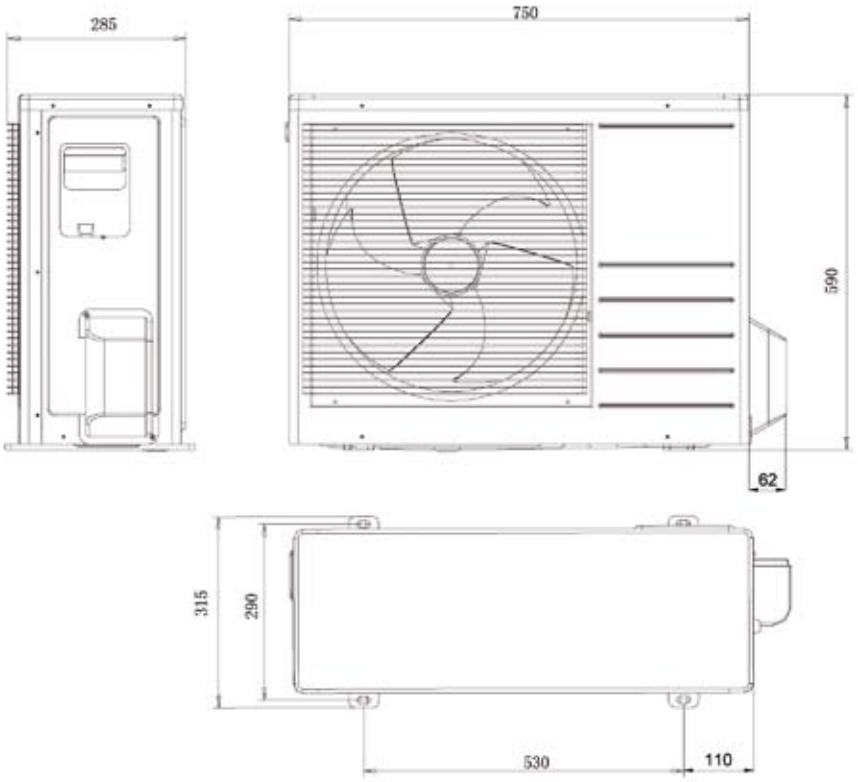


Air intake from back

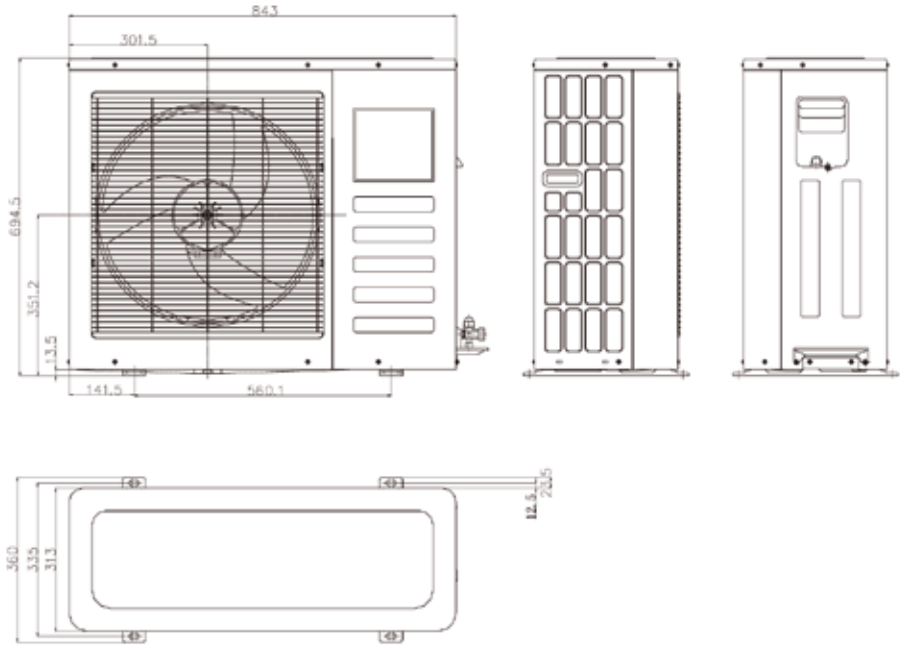


Air intake from bellow - Standard on size 12

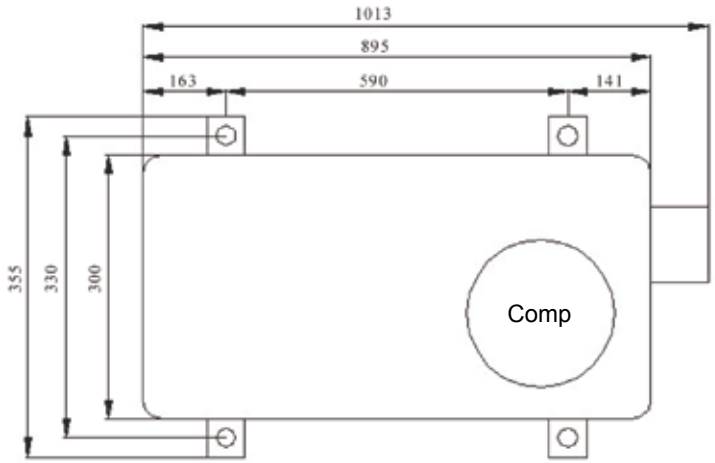
NHM 12


285
750
590
62
315
290
530
110

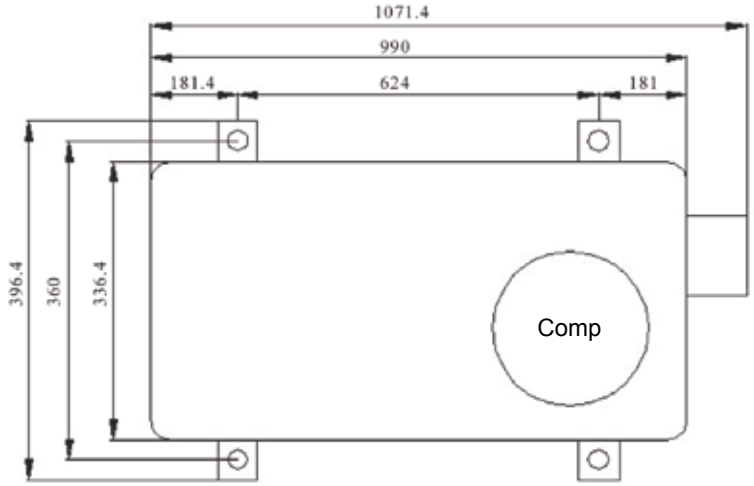
NHM 18


843
301.5
694.5
351.2
13.5
141.5
560.1
360
335
313
12.5
20.5

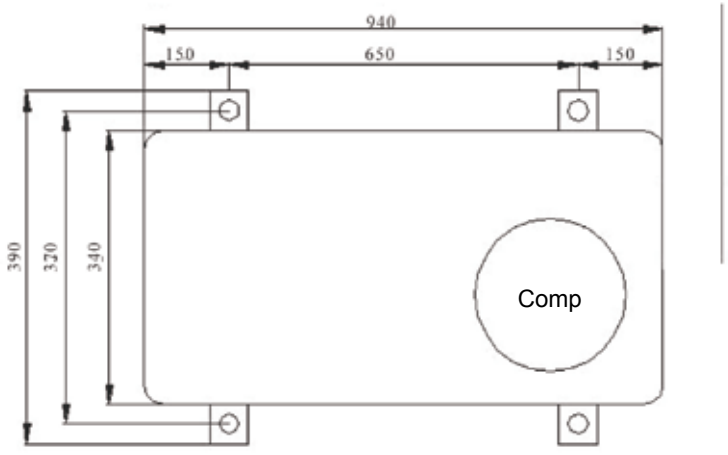
NHM 24

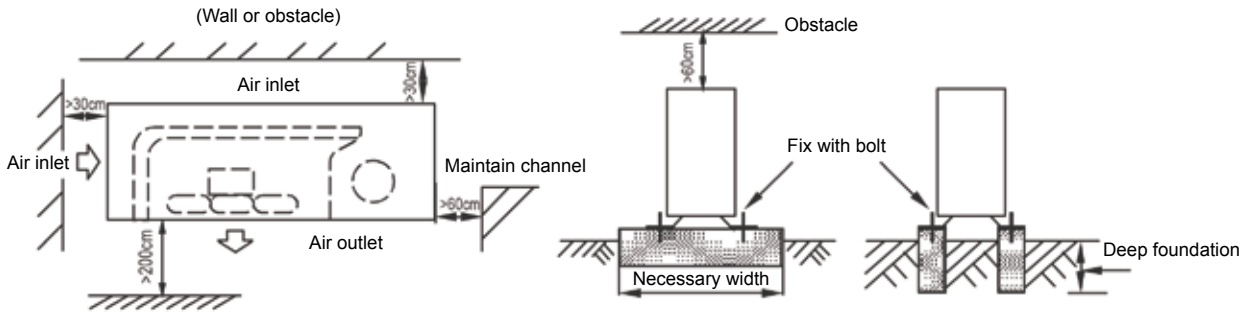


NHM 30&36

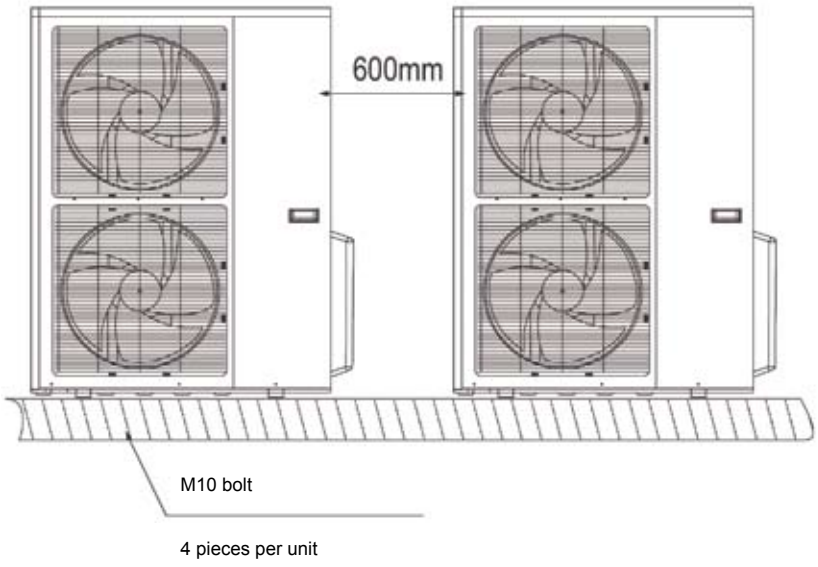


NHM 48&60

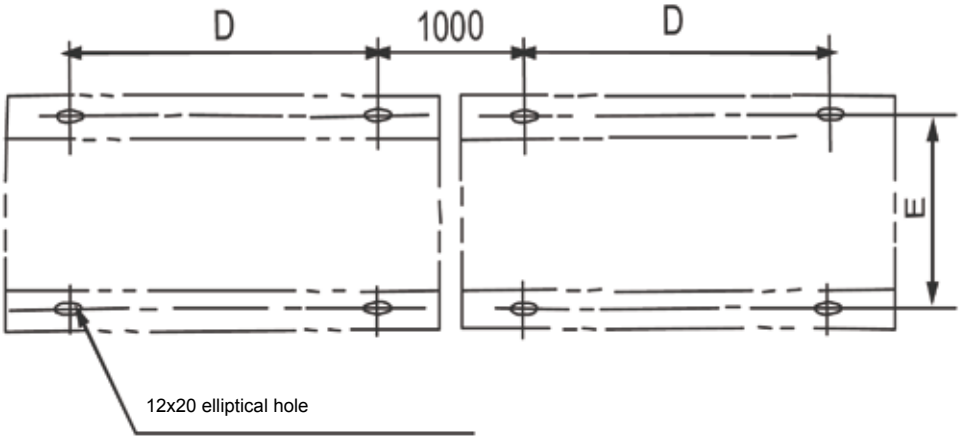




600 mm is necessary between 2 indoor units



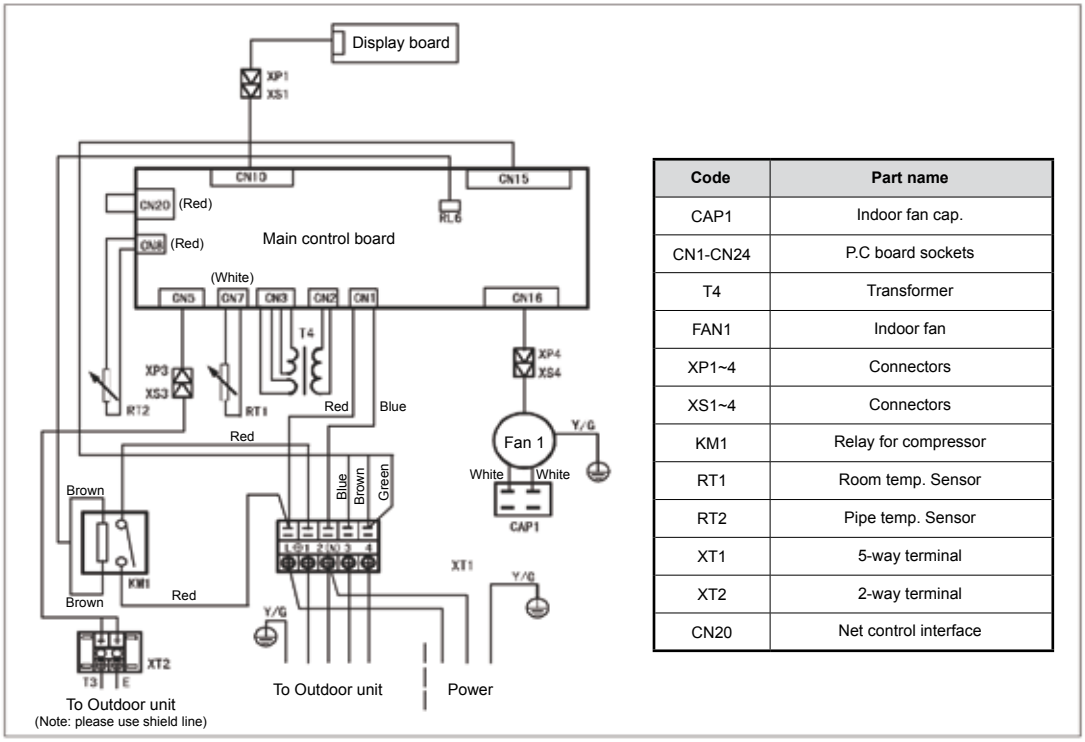
DISTANCE BETWEEN FOOT BOLTS



D, E: please refer to outline and dimensions of outdoor units

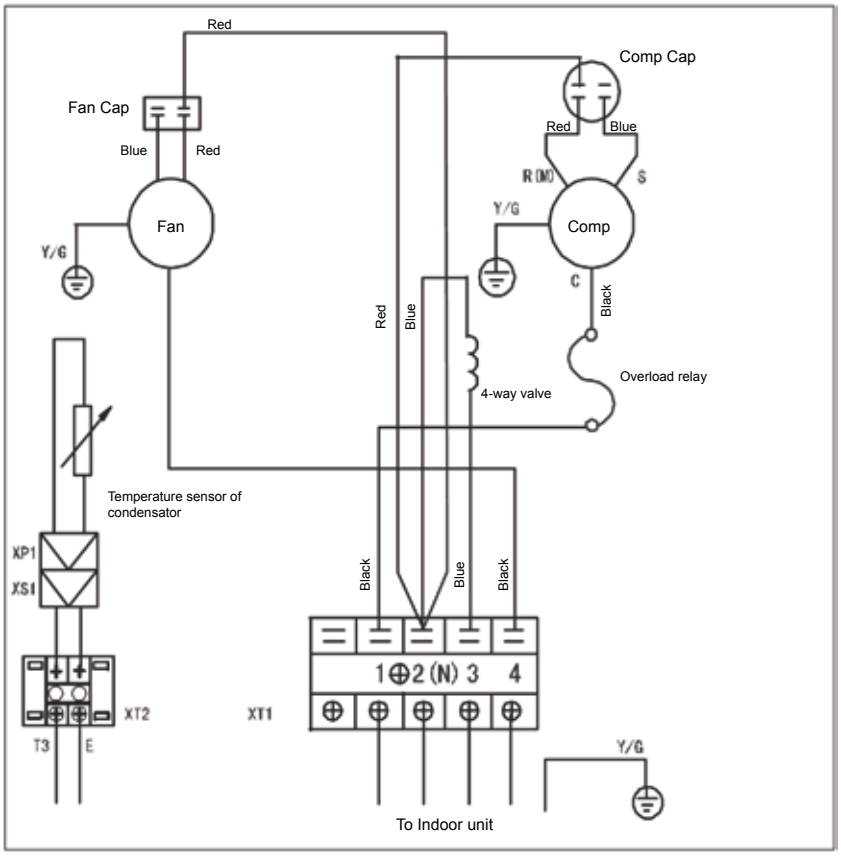
NHM 12

Indoor unit:



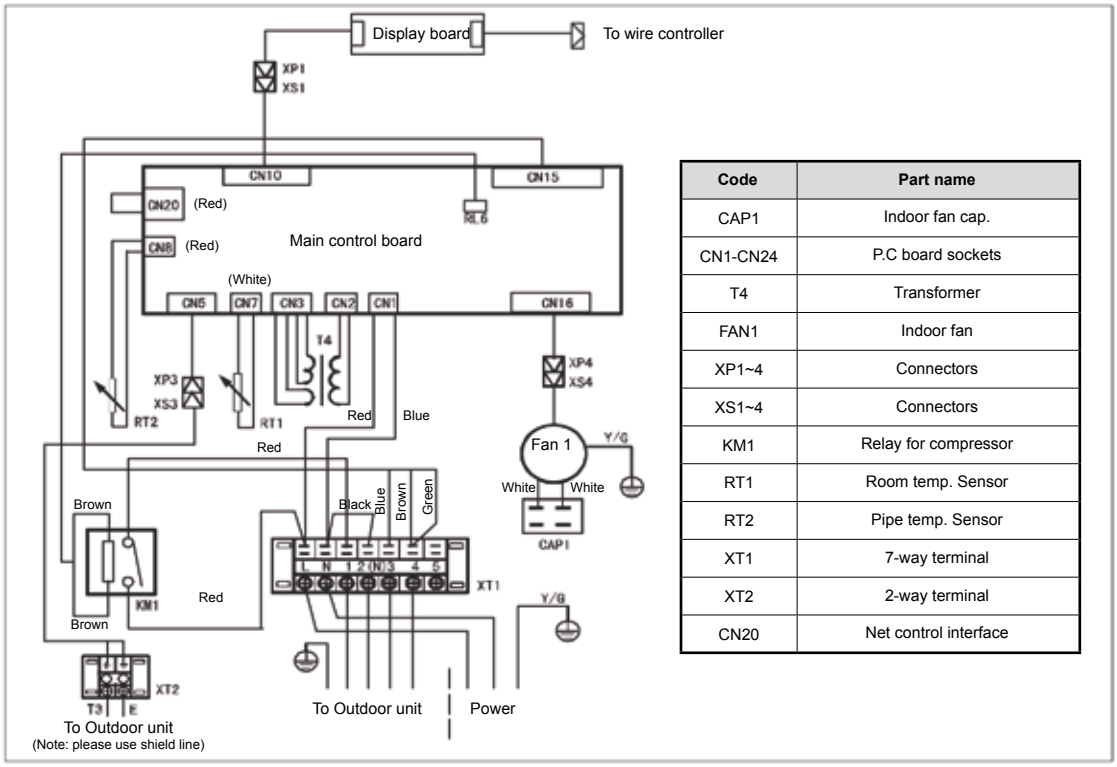
Code	Part name
CAP1	Indoor fan cap.
CN1-CN24	P.C board sockets
T4	Transformer
FAN1	Indoor fan
XP1~4	Connectors
XS1~4	Connectors
KM1	Relay for compressor
RT1	Room temp. Sensor
RT2	Pipe temp. Sensor
XT1	5-way terminal
XT2	2-way terminal
CN20	Net control interface

Outdoor unit:



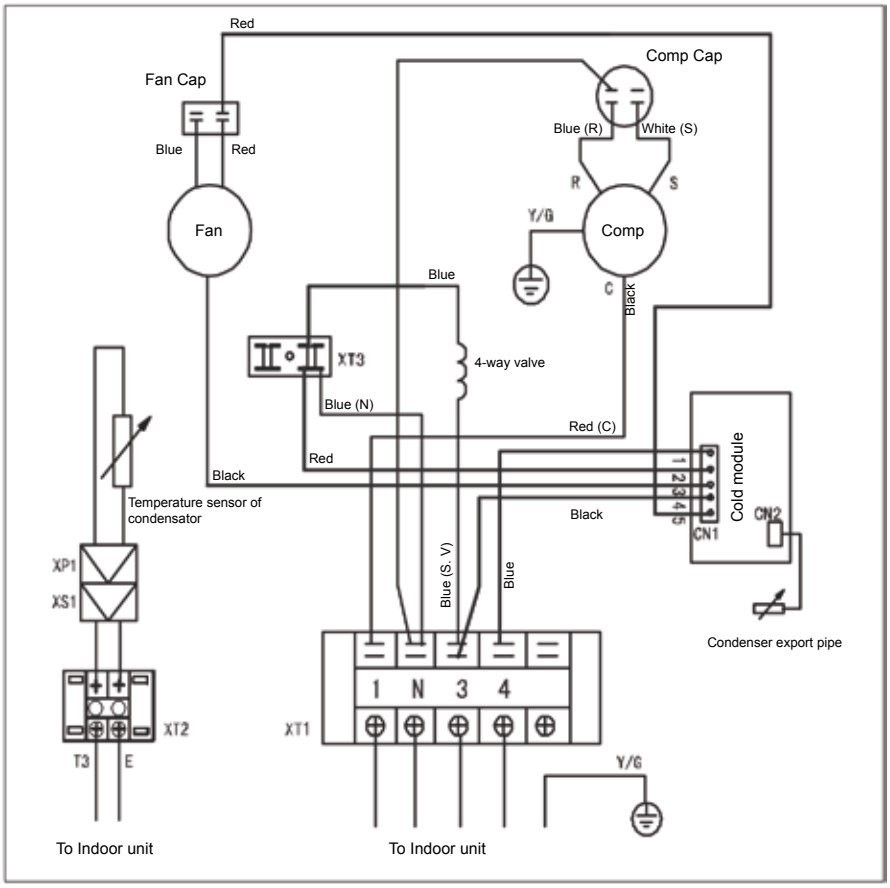
NHM 18

Indoor unit:



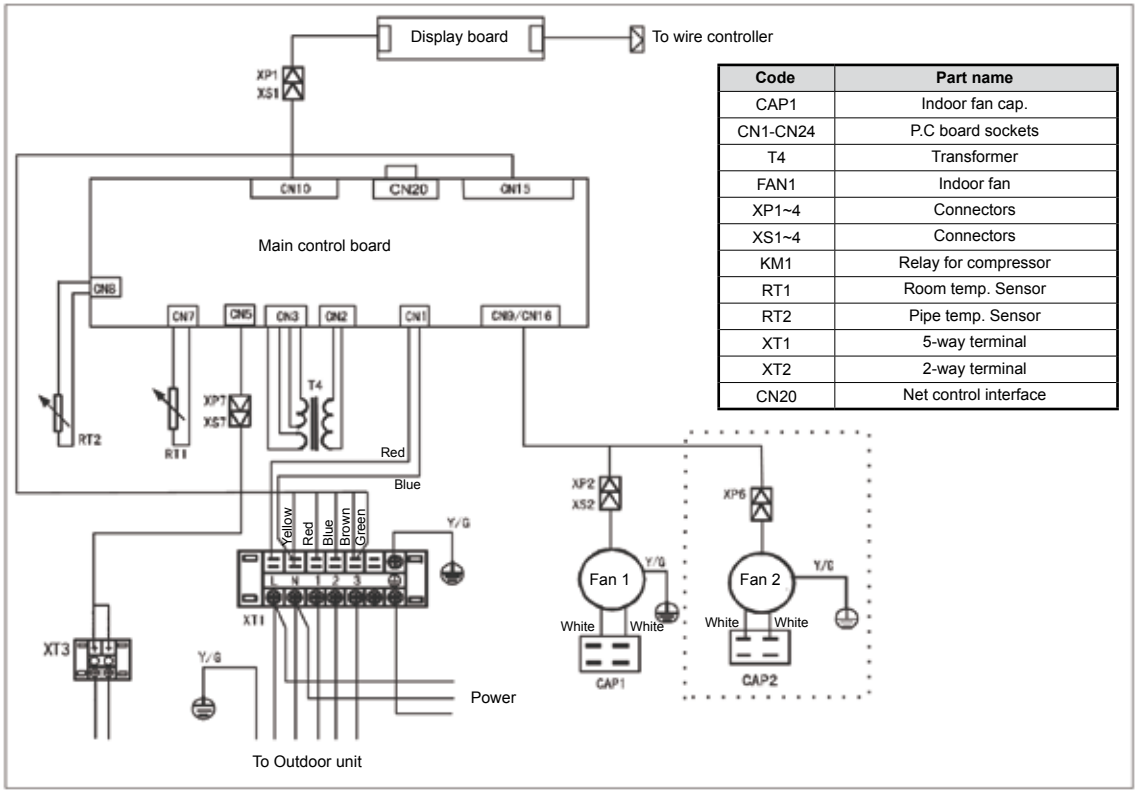
Code	Part name
CAP1	Indoor fan cap.
CN1-CN24	P.C board sockets
T4	Transformer
FAN1	Indoor fan
XP1~4	Connectors
XS1~4	Connectors
KM1	Relay for compressor
RT1	Room temp. Sensor
RT2	Pipe temp. Sensor
XT1	7-way terminal
XT2	2-way terminal
CN20	Net control interface

Outdoor unit:



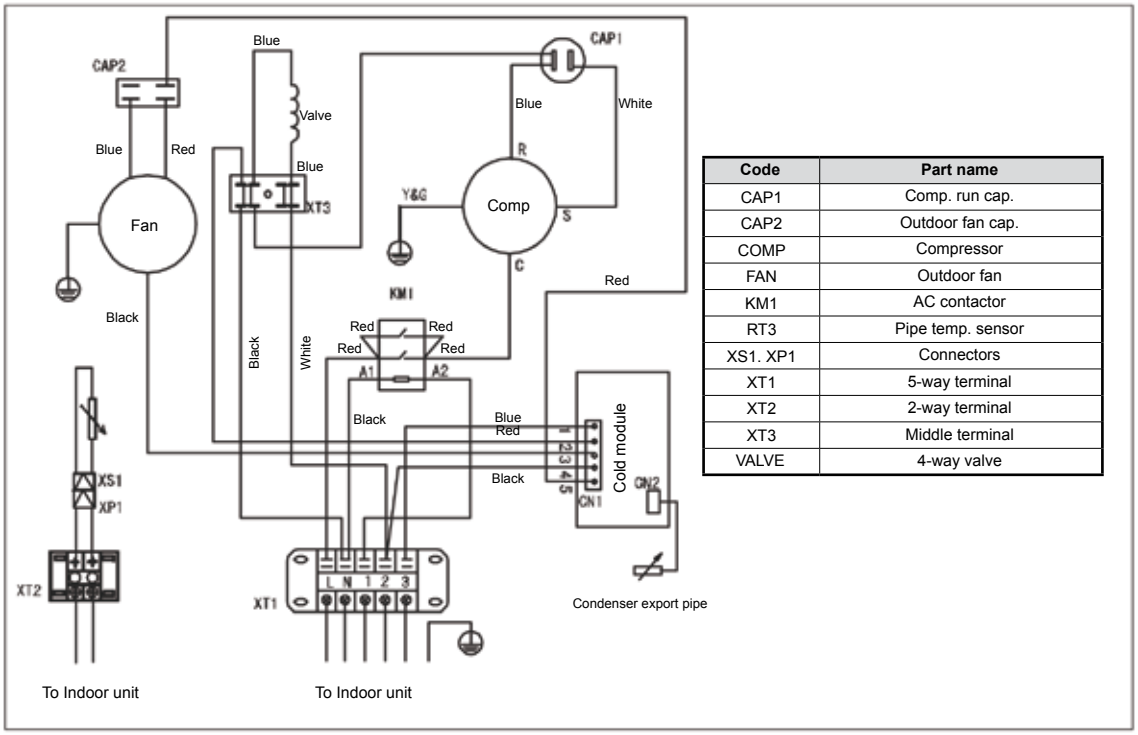
NHM 24

Indoor unit:



Code	Part name
CAP1	Indoor fan cap.
CN1-CN24	P.C board sockets
T4	Transformer
FAN1	Indoor fan
XP1~4	Connectors
XS1~4	Connectors
KM1	Relay for compressor
RT1	Room temp. Sensor
RT2	Pipe temp. Sensor
XT1	5-way terminal
XT2	2-way terminal
CN20	Net control interface

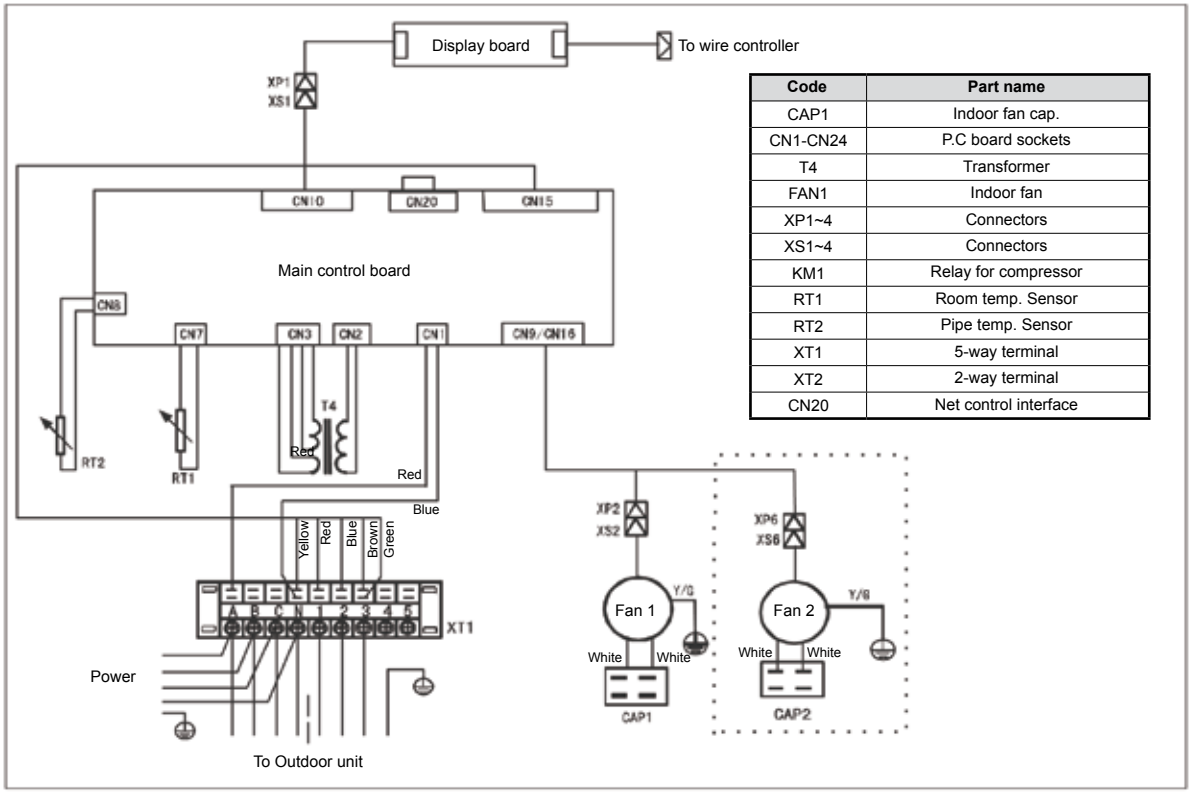
Outdoor unit:



Code	Part name
CAP1	Comp. run cap.
CAP2	Outdoor fan cap.
COMP	Compressor
FAN	Outdoor fan
KM1	AC contactor
RT3	Pipe temp. sensor
XS1. XP1	Connectors
XT1	5-way terminal
XT2	2-way terminal
XT3	Middle terminal
VALVE	4-way valve

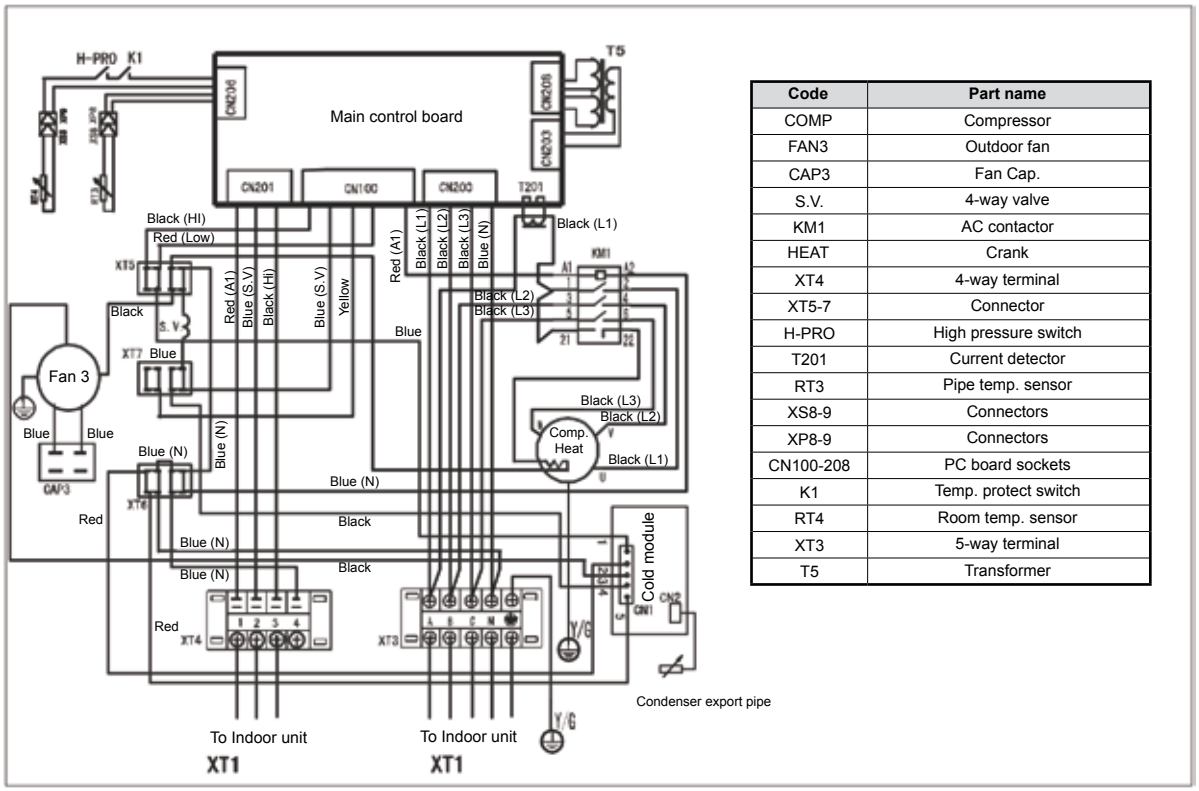
NHM 30&36 (3 phase)

Indoor unit:



Code	Part name
CAP1	Indoor fan cap.
CN1-CN24	P.C board sockets
T4	Transformer
FAN1	Indoor fan
XP1~4	Connectors
XS1~4	Connectors
KM1	Relay for compressor
RT1	Room temp. Sensor
RT2	Pipe temp. Sensor
XT1	5-way terminal
XT2	2-way terminal
CN20	Net control interface

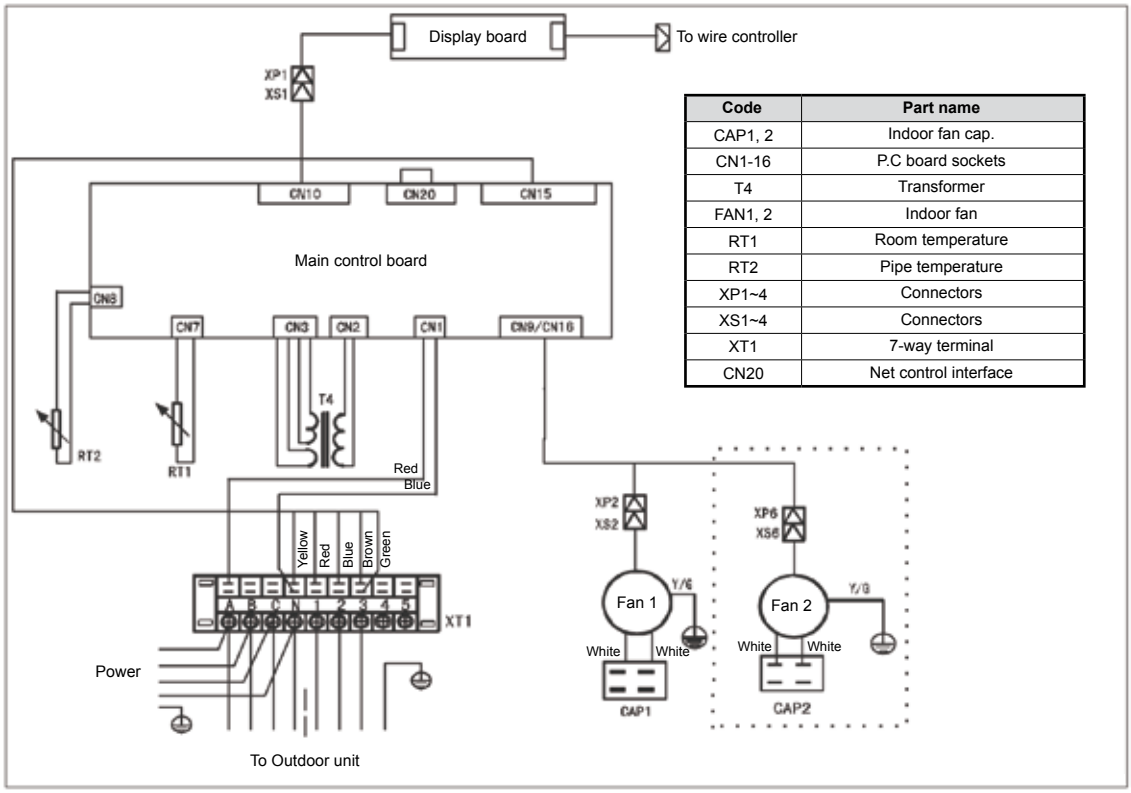
Outdoor unit:



Code	Part name
COMP	Compressor
FAN3	Outdoor fan
CAP3	Fan Cap.
S.V.	4-way valve
KM1	AC contactor
HEAT	Crank
XT4	4-way terminal
XT5-7	Connector
H-PRO	High pressure switch
T201	Current detector
RT3	Pipe temp. sensor
XS8-9	Connectors
XP8-9	Connectors
CN100-208	PC board sockets
K1	Temp. protect switch
RT4	Room temp. sensor
XT3	5-way terminal
T5	Transformer

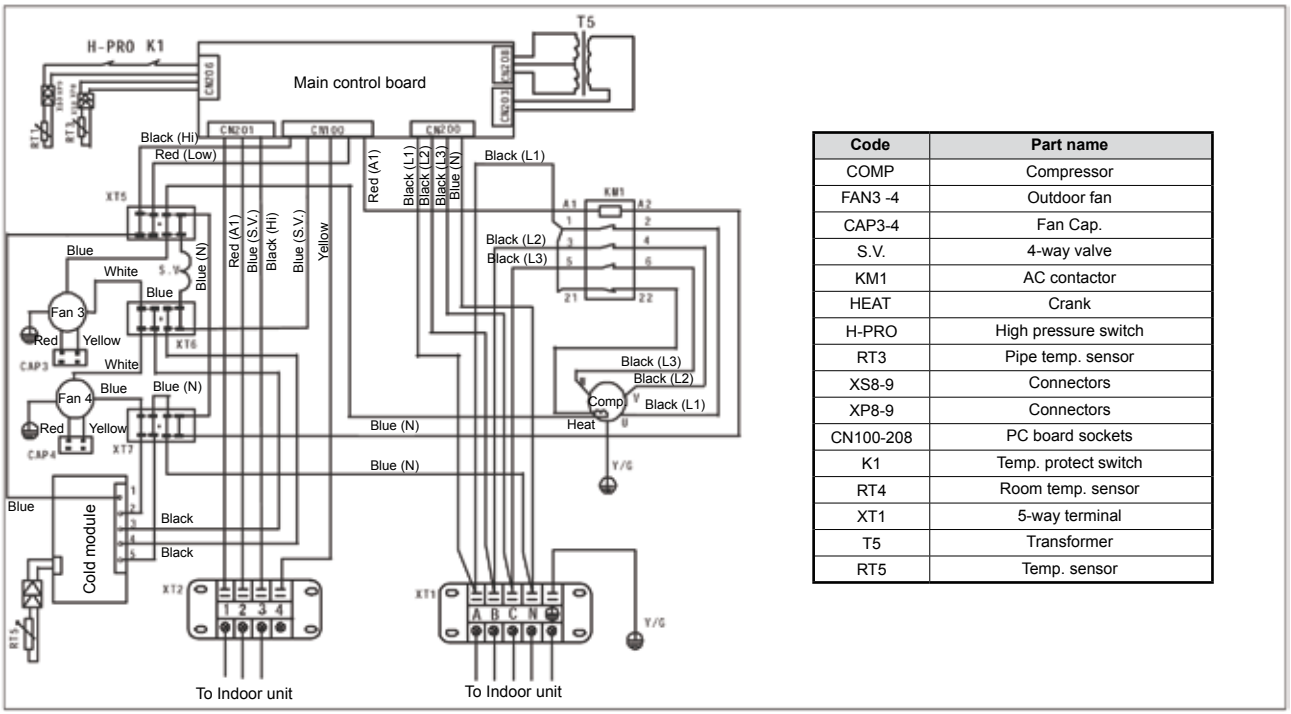
NHM 48

Indoor unit:



Code	Part name
CAP1, 2	Indoor fan cap.
CN1-16	P.C board sockets
T4	Transformer
FAN1, 2	Indoor fan
RT1	Room temperature
RT2	Pipe temperature
XP1~4	Connectors
XS1~4	Connectors
XT1	7-way terminal
CN20	Net control interface

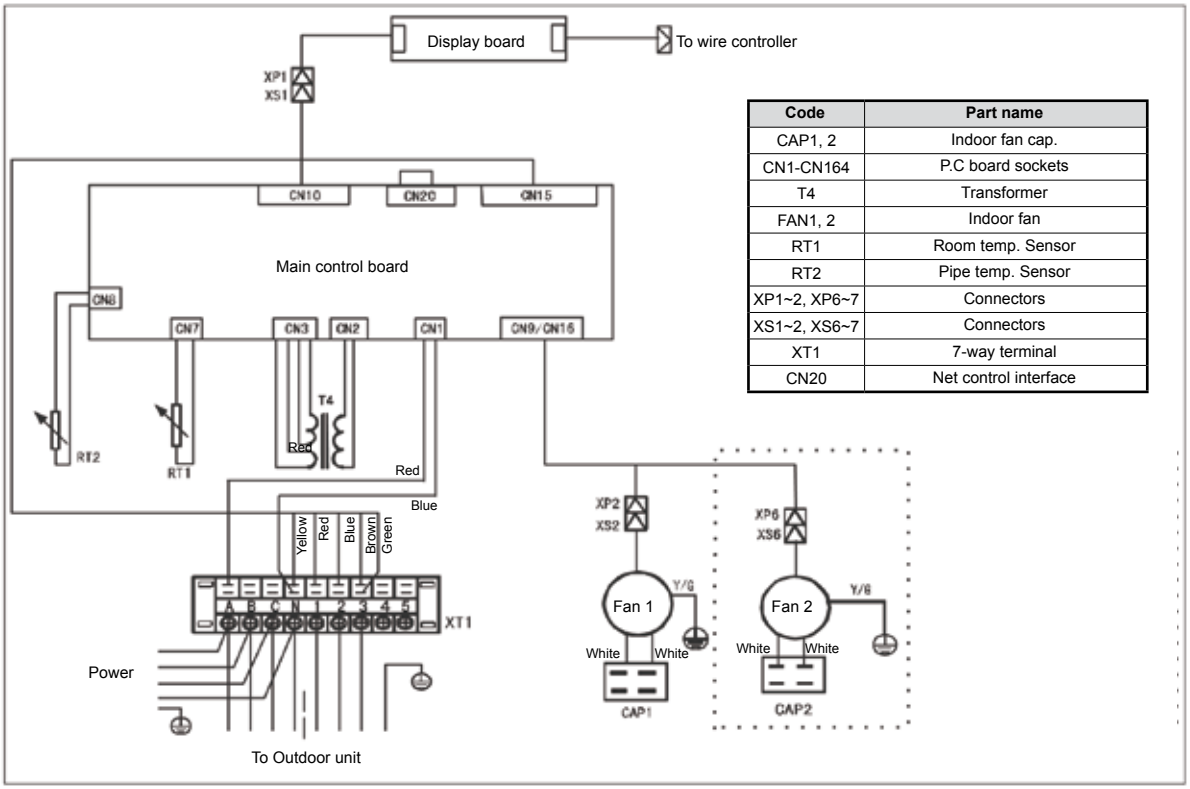
Outdoor unit:



Code	Part name
COMP	Compressor
FAN3 -4	Outdoor fan
CAP3-4	Fan Cap.
S.V.	4-way valve
KM1	AC contactor
HEAT	Crank
H-PRO	High pressure switch
RT3	Pipe temp. sensor
XS8-9	Connectors
XP8-9	Connectors
CN100-208	PC board sockets
K1	Temp. protect switch
RT4	Room temp. sensor
XT1	5-way terminal
T5	Transformer
RT5	Temp. sensor

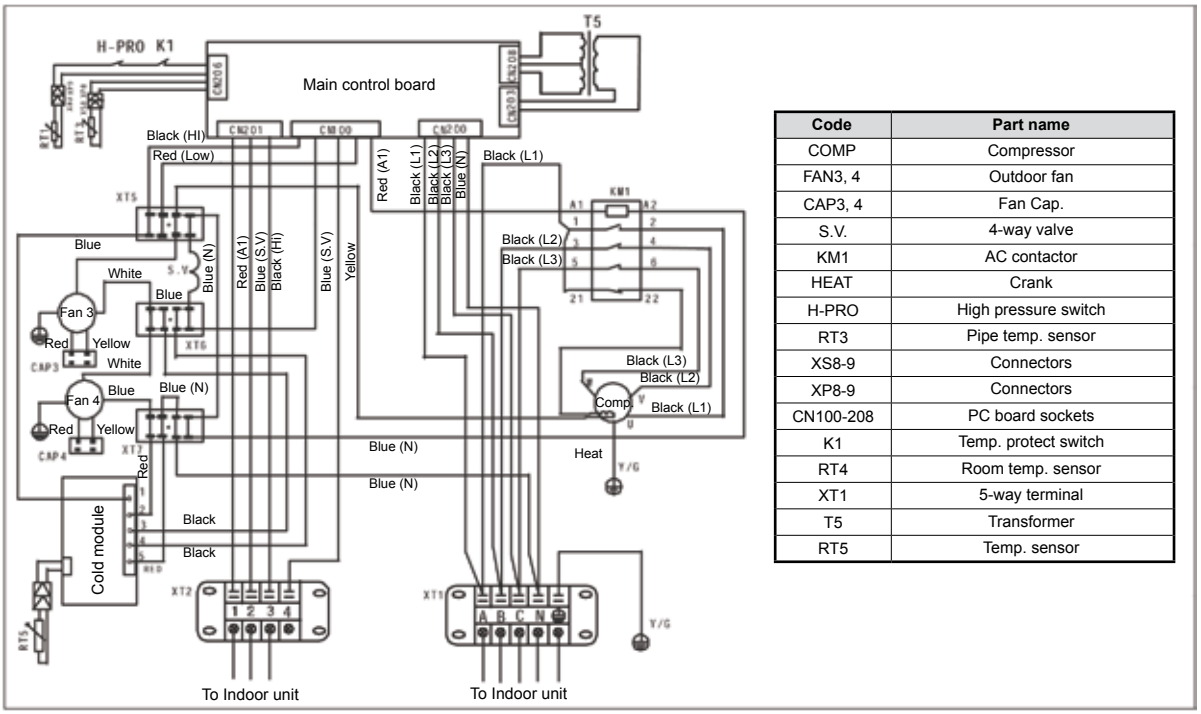
NHM 60

Indoor unit:



Code	Part name
CAP1, 2	Indoor fan cap.
CN1-CN164	P.C board sockets
T4	Transformer
FAN1, 2	Indoor fan
RT1	Room temp. Sensor
RT2	Pipe temp. Sensor
XP1~2, XP6~7	Connectors
XS1~2, XS6~7	Connectors
XT1	7-way terminal
CN20	Net control interface

Outdoor unit:



Code	Part name
COMP	Compressor
FAN3, 4	Outdoor fan
CAP3, 4	Fan Cap.
S.V.	4-way valve
KM1	AC contactor
HEAT	Crank
H-PRO	High pressure switch
RT3	Pipe temp. sensor
XS8-9	Connectors
XP8-9	Connectors
CN100-208	PC board sockets
K1	Temp. protect switch
RT4	Room temp. sensor
XT1	5-way terminal
T5	Transformer
RT5	Temp. sensor

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