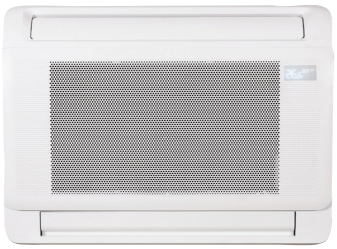
TECHNICAL MANUAL

DUCTLESS MINI-SPLIT MULTI-ZONE SYSTEM

Models:

NDHASHDB | NDHASCB | NDHAS4CB | NDHAS22B | NDHAS26B
NDHAMBB-18-O | NDHAMBB-27-O |NDHAMBB-36-O | NDHAMBB-48-O






Wolf Steel Ltd., 24 Napoleon Rd., Barrie, ON, L4M 0G8 Canada
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R454B

Contents

1. Model Reference 5

2. External Appearance 6

2.1. Indoor Unit 6

2.2. Outdoor Unit 6

3. Functions 7

3.1. High Static Slim Duct Type 7

3.2. Console Type 8

3.3. 1-way Cassette Type 9

3.4. Compact Cassette Type 11

3.5. Premium High Wall 12

3.6. Ultimate High Wal 13

4. Part names of Indoor units 15

4.1. High Static Slim Duct Type 15

4.2. Console Type 15

4.3. Compact Cassette Type 16

4.4. Wall Mounted Type NDHAS22B 16

4.5. Wall Mounted Type NDHAS26B 17

5. Indoor Unit Combination 18

6. Dimensional Drawings 20

6.1. Indoor Unit 20

6.2. Outdoor Unit 25

7. Centre of Gravity 28

7.1. NDHAMBB-18-O, NDHAMBB-27-O 28

7.2. NDHAMBB-36-O 28

7.3. NDHAMBB-48-O 29

8. Electrical Wiring Diagrams 30

8.1. Indoor Unit 30

8.2. Outdoor Unit 35

9. Refrigeration Cycle Diagrams 39

10. Noise Criterion Curves 43

10.1. Indoor Unit 43

10.2. Outdoor Unit 50

1. Model Reference

Refer to the following table to determine the specific indoor and outdoor unit model number of your purchased equipment.

Indoor Unit		Outdoor Unit	Power Supply
Low Static Slim Duct Type	NDHAS22BB-09-I	NDHAMBB-18-O NDHAMBB-27-O NDHAMBB-36-O NDHAMBB-48-O	1Phase, 208/230V~, 60Hz
	NDHAS22BB-12-I		
	NDHAS22BB-18-I		
	NDHAS22BB-24-I		
High Wall Ultimate Series	NDHAS26BB-06-I		
	NDHAS26BB-09-I		
	NDHAS26BB-12-I		
	NDHAS26BB-18-I		
	NDHAS26BB-24-I		
	NDHAS26BB-33-I		
Floor Consoles	NDHASCBB-09		
	NDHASCBB-12		
	NDHASCBB-18		
4-Way Cassettes	NDHAS4CBB-12		
	NDHAS4CBB-18		
High Static Slim Duct	NDHASHDBB-09		
	NDHASHDBB-12		
	NDHASHDBB-18		
	NDHASHDBB-24		

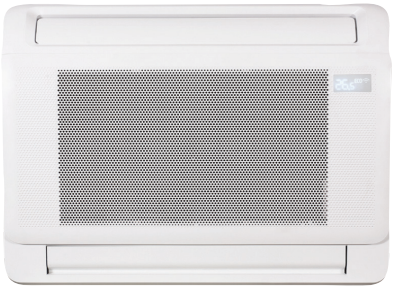
2. External Appearance

2.1. Indoor Unit

- **NDHASHDB**



- **NDHASCB**



- **NDHAS4CB**



- **Wall Mounted Type - NDHAS22B**



- **Wall Mounted Type NDHAS26B**



2.2. Outdoor Unit

- **Single Fan Outdoor Unit**



- **Double Fan Outdoor Unit**



3. Functions

3.1. High Static Slim Duct Type

3.1.1. Real-time Constant Air Volume

With Auto Airflow Match, A7 Duct can automatically match the airflow volume to different ducting design, resulting in installation convenience, comfortable experience and cost saving.

3.1.2. Two-ways of Installation

Two types of installation methods can be selected:

1. Ceiling concealed **(Fig. 1)** and
2. Floor concealed (optional) **(Fig. 2).**

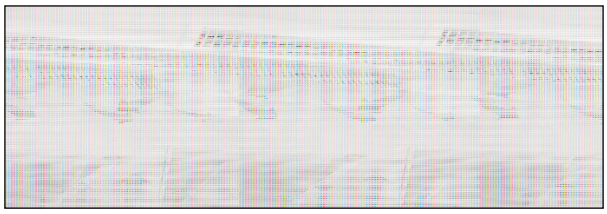


Fig. 1

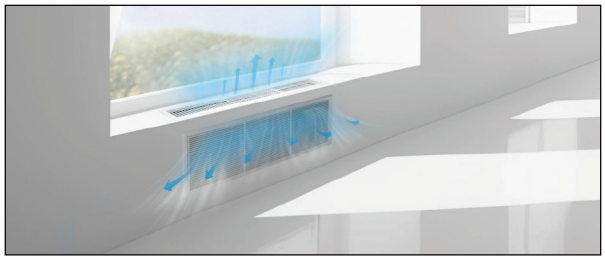


Fig. 2

The MSP duct machine does not need to replace the water tray.and the water pump is compatible with two installation methods **(Fig. 3&4).**

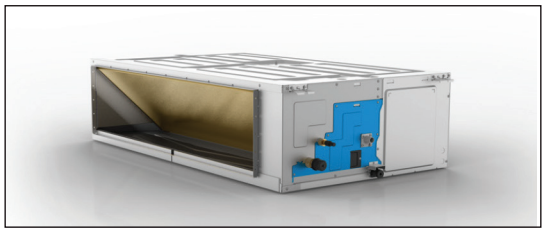


Fig. 3

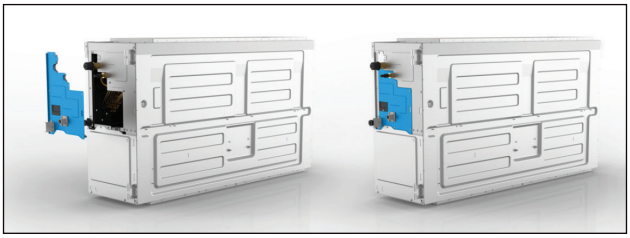


Fig. 4

3.1.3. Optimization of Duct Design

By applying the new design of duct, the interior noise level has been reduced significantly. End users would not get irritable easily even staving indoor for a long time **(Fig. 5).**

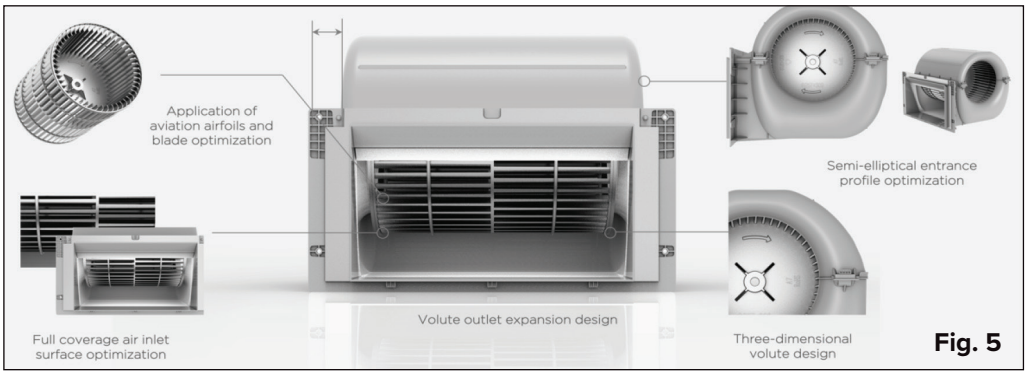


Fig. 5

3.1.4. Upgrade of Fan Motor

- The design of integrated motor bracket, which is three parts integrated into one part, can improve installation stability, more friendly disassembly and assembly
- The volute spring buckle design improves installation stability and makes disassembly and assembly more friendly.

3.1.5. Upgrade of Electric Control

The area of the electric control box has been increased by 10%, and the driver board has been miniaturized, reducing the area by 40%. Larger maintenance space, and more convenient to replace the electronic control box.

3.1.6. Upgrade of Drain Pump

Service area of A7 Duct is 20% more than A6. No need to cross the hole when replacing drain pump and temperature sensor **(Fig. 6).**

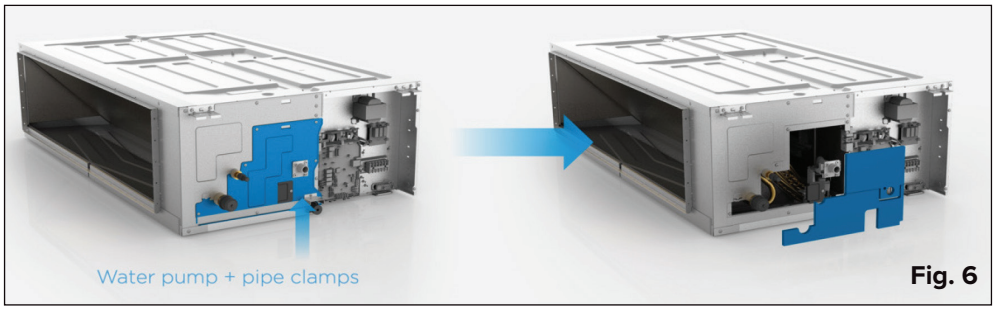


Fig. 6

3.2. Console Type

3.2.1. An Elegant And Compact Design

- The look of newly-upgraded console unit features flowing lines that is aesthetic enough.
- Its unobtrusive design can easily fit into most interiors with different decorating-schemes.
- The width of the machine has been reduced by 10mm, taking less space.

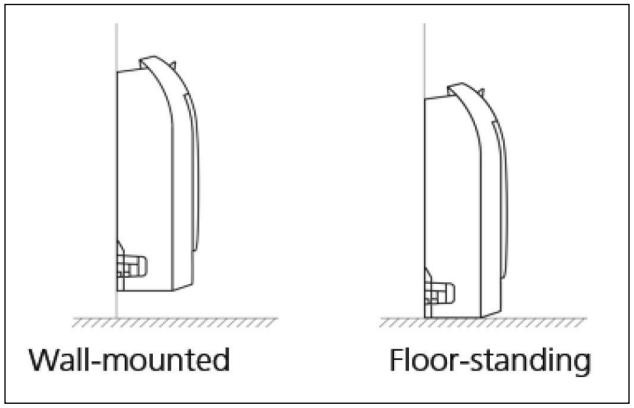


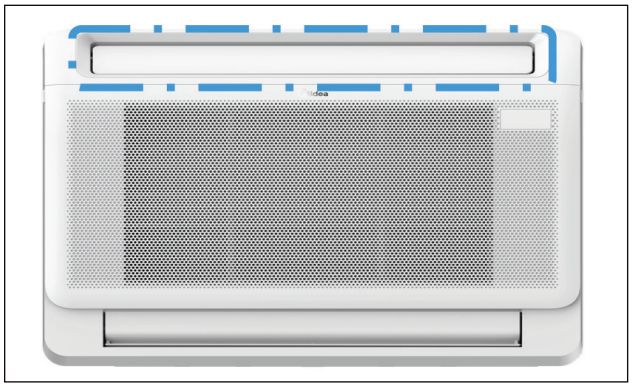
Fig. 7

3.2.2. A Perfect Choice For New Buildings And Renovation Projects

- Console unit can be installed standing on the floor, or wall-mounted **(Fig. 7).**
- It is a great option for radiator replacement in order to save your space while provide more functions.

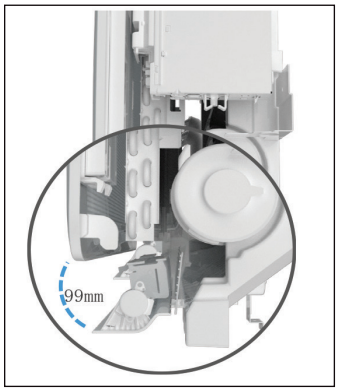
3.2.3. Dual Air Outlets With Larger Dimension

Efficiently improve air volume, providing constant, quick cooling and heating throughout whole year.



65.3% LARGER upper air outlet*

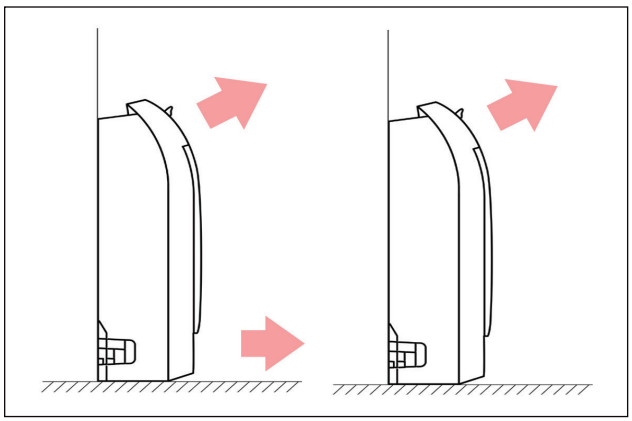
Dimension changes from 516mm*43mm to 655mm*56mm

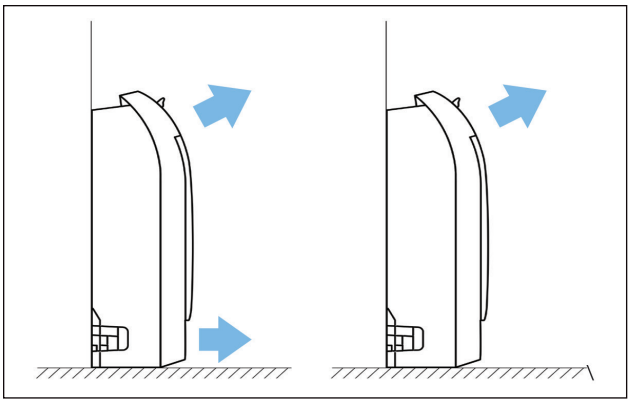


94.1% WIDER lower air outlet*

99mm large lower air out deliver even warm air distribution

- Wide Airflow & Constant Comfort-Dual air outlets satisfy both cooling and heating needs in different seasons and allows a quick comfort of the room.



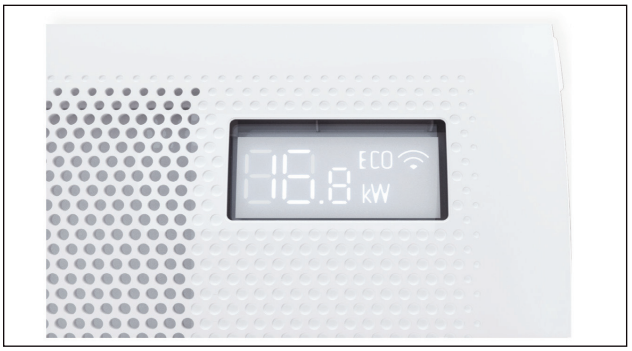


***Compared to last generation console unit**

3.2.4. Air Quality

We care your indoor air quality from many perspectives

- Get Ideal HUMIDITY for You
  - » New console efficiently dehumidify the air to keep the ambient air dry and at comfort humidity level.
  - » Display screen on front panel is reliable and user-friendly to operate to use.



3.3. 1-way Cassette Type

3.3.1. Elevation Panel

- From now on, no more climbing up & down, because the panel itself can be up & down.
- By activating the Elevation Panel function on remote controller (or smart controller), the panel will go straight down to you for easily taking out the air filter. Cleaning gets all easy.

- The adjustable length of the ropes can be set as 1.5M or 2M for different height of the storey.
- You can simply use your hand to suspend the panel at you desired height in its process of the going down so that you don't have to bend down for the air filter.



3.3.2. 2-way Installation

- PushIn INSTALLATION
  - » When it comes to choosing the position to hang up the hooks and the unit, there are strict requirements for the ceiling condition, and not always the desired position you want to install the unit is the ideal position.
  - » An unique & exclusive PushIn Case is designed for easy installation options.
  - » Installers can fix the unit case on the beams with screws and then plug in the EVOX one-way cassette and connect conduits.
  - » This method enables installation no longer subjecting to the ceiling conditions, and free the installers from manual measurement and adjustment of the hooks distance, guaranteeing the unit is precisely placed in the position you desired.



- HangUp INSTALLATION
  - » For sure, installers can go with a more common approach to fix the unit with hooks.
  - » Our hangers with optimized anti-cutting design are easy to grab and lift up, preventing hands from scratching by the sharp edge.

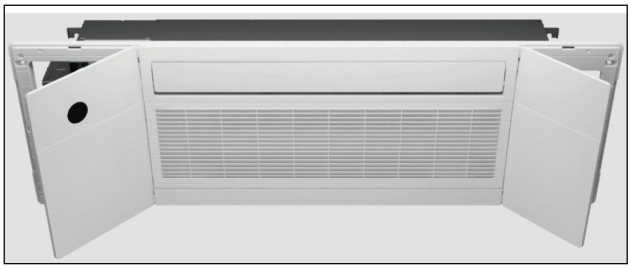


3.3.3. Build-in Drain Pump

- The built-in water pump can discharge the condensate water.
- No need to add an extra water pump to the side of the unit.

3.3.4. Easy–to-access Core Components

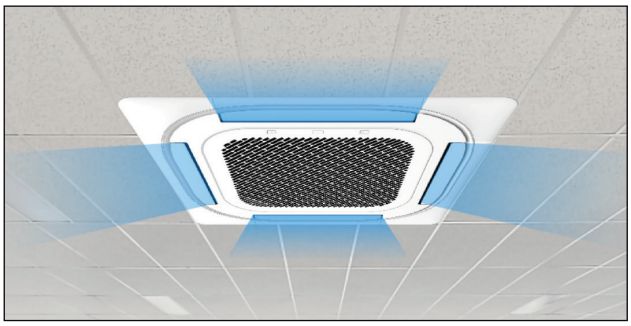
- Adopting the design of the high wall split, installers only have to open the front panel to gain access to PCB box and water pump sections.



3.4. Compact Cassette Type

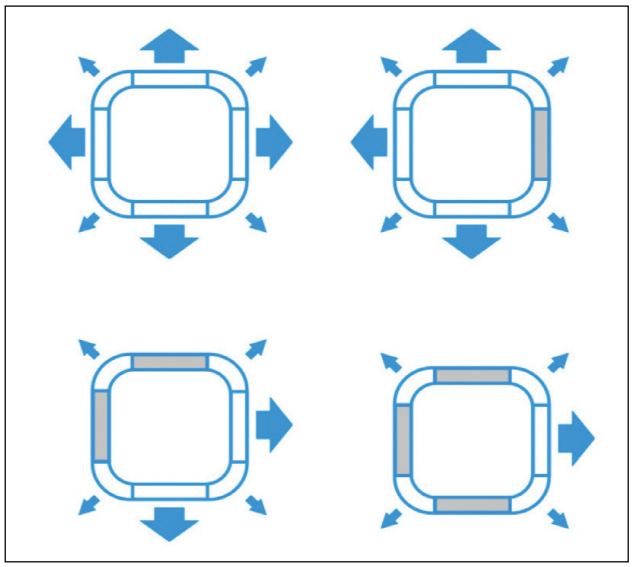
3.4.1. Nearly 360° Air Discharge Highest Efficiency and Comfort

- With near to 360° air discharge deliver even and powerful air flow, you will never be bothered by harsh, cold air draughts. Enjoy a real immersive air in open space.



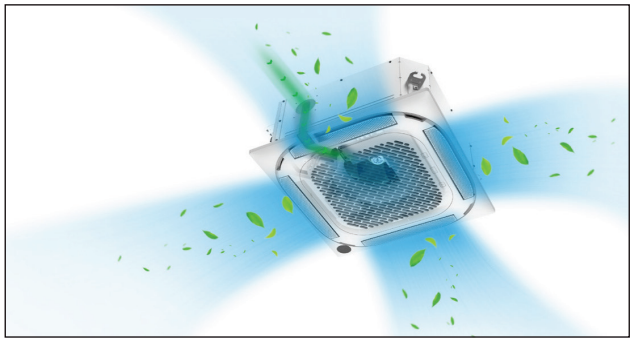
3.4.2. Individual vane control customized Everyone's Own Comfort

- Individual Vane Control, 4 possible cooling experience in 1 occasion.



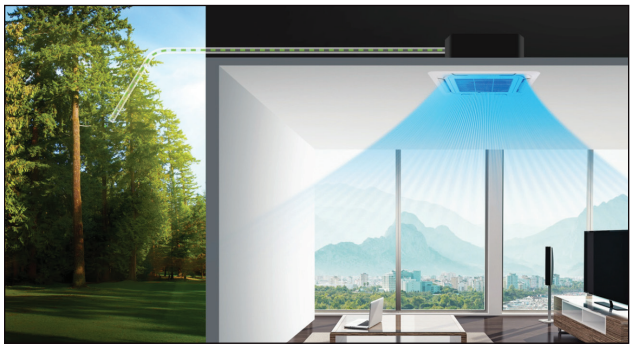
3.4.3. Fresh Air

- There is a reserved fresh air port to bring in fresh air from outside, keeping the indoor air fresh and healthy.
- The indoor unit PCB is also standard with a New Fan connection ports(CN8) to provide 220V power to external fan motor less than 200W.



3.4.4. Fresh Air

- Fresh air intake function brings you fresh and comfortable air feeling.

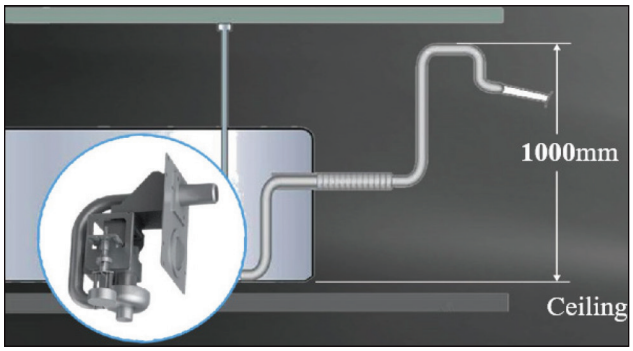


3.4.5. Wired Controller

- Compared with infrared remote controller, wired controller can be fixed on the wall and avoid mislaying. It's mainly used for commercial zone and makes air conditioner control more convenient.

3.4.6. Build-in Drain Pump

- The drain pump can lift the condensed water up to 1000mm. Which is convenient to install drainage pipes under most conditions. The drainage pipe can be installed on either the left or the right side.



3.5. Premium High Wall

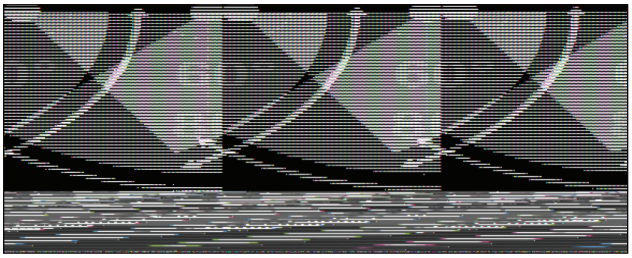
3.5.1. Long-Distance Windblast

The optimized air duct design synergizes with the turbo fan speed to deliver longer airflow, so you can enjoy the cool air with distance reaching up to 25 meters*.

***Only applies to 90 IDU.3.9.2**

3.5.2. 3D Airflow

The directional air-outlet moves automatically both horizontally and vertically, directing nice and cool airflow to cover every corner of the room.



3.5.3. Wind Avoid Me

Avoid wind blowing directly on you by using the remote to adjust the wind direction.

3.5.4. i-Clean

- The i-Clean Technology washes away dust, mold, and grease that may cause odors when it adheres to the heat exchanger by automatically freezing and then rapidly thawing the frost.
- The internal wind wheel then keeps operating to blow-dry the evaporator, thus preventing the growth of mold and keeping the inside clean.

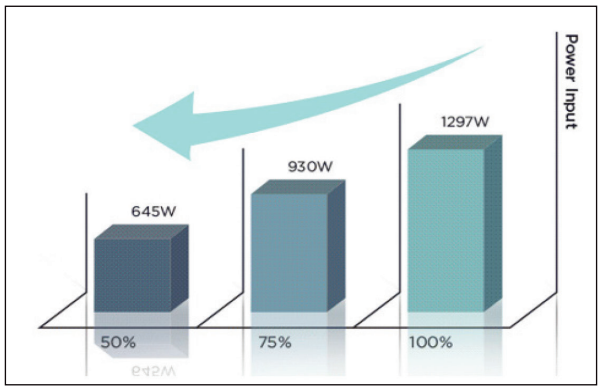
3.5.5. Energy Saving Econo+ mode

Just touch the Econo+ button to activate the mode. Your AC can keep you cool over an 8-hour night period with as little as 1 kWh energy consumption, saving 71%.

3.5.6. Gear Change

Midea inverter air conditioners offer three operating power options: 50%, 75%, and 100%. You can choose a lower power level to conserve energy.



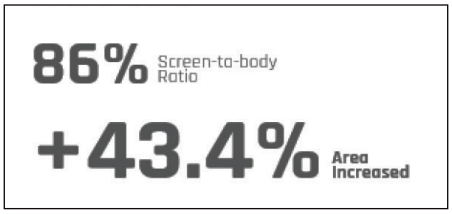


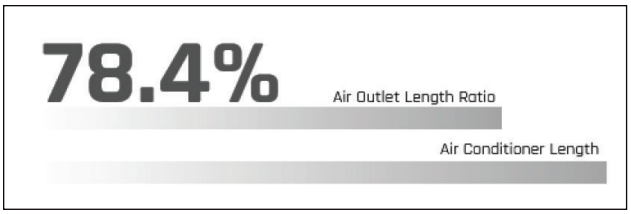
3.6. Ultimate High Wal

3.6.1. Compact Body, Better Efficiency

795mm * 295mm.Owing to the re-construction, a smaller but stronger machine was invented. An higher energy efficiency standard is achieved.

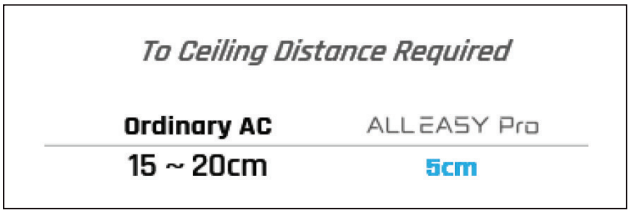
3.6.2. Space Released for More Air In N Out





3.6.3. Shorter Distance Required, for More Flexibility to Enjoy.

Thanks to the air-intake's enlargement, the air conditioner operates smoothly with low noise and sufficient cooling capacity even being fixed closely to the ceiling.



3.6.4. Easy Disassemble

Thanks to the Snap-and-Snap design of the hasps, We get rid of the fuss for 7 or more screws in different places of a typical IDU to disassemble.

The whole disassemble process only costs you just 1 minute

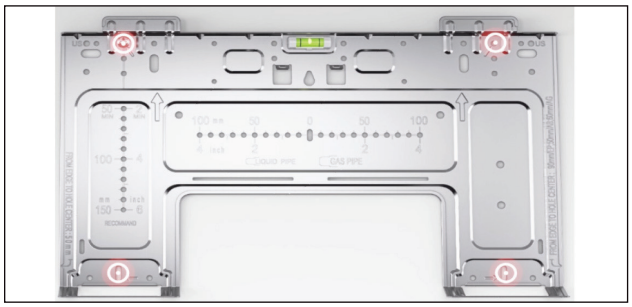
3.6.5. Easy Clean-Quick Cleaning from the Top

Thanks to the Mag Pull design – 6 round magnetic connectors on the filter, the top cover filter can be easily removed and put back just within 1 soft 'click'. The whole process is free of dust-stir.

No need to bother opening up the front panel any more. Clean your filter as often as you want.

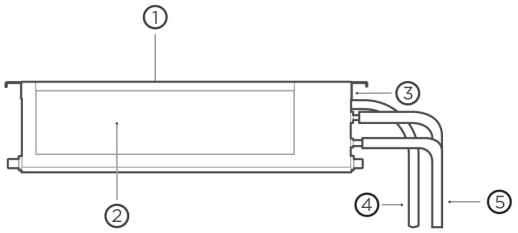
3.6.6. Easy Installation-Just Put It On,Simply

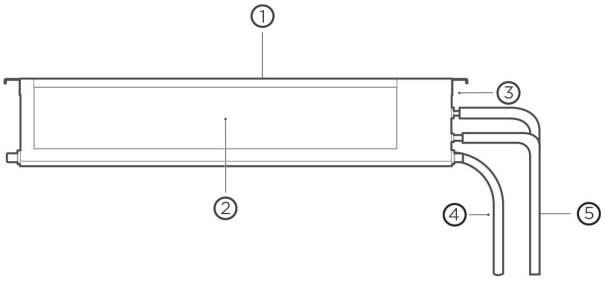
1. Mark the position, with Scale-on-Plate, then Fix the installation,
2. Horizontally measure with the Built-In Level Bubble and Pin other nails
3. AC on the wall.

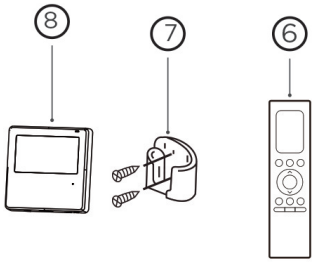


4. Part names of Indoor units

4.1. High Static Slim Duct Type

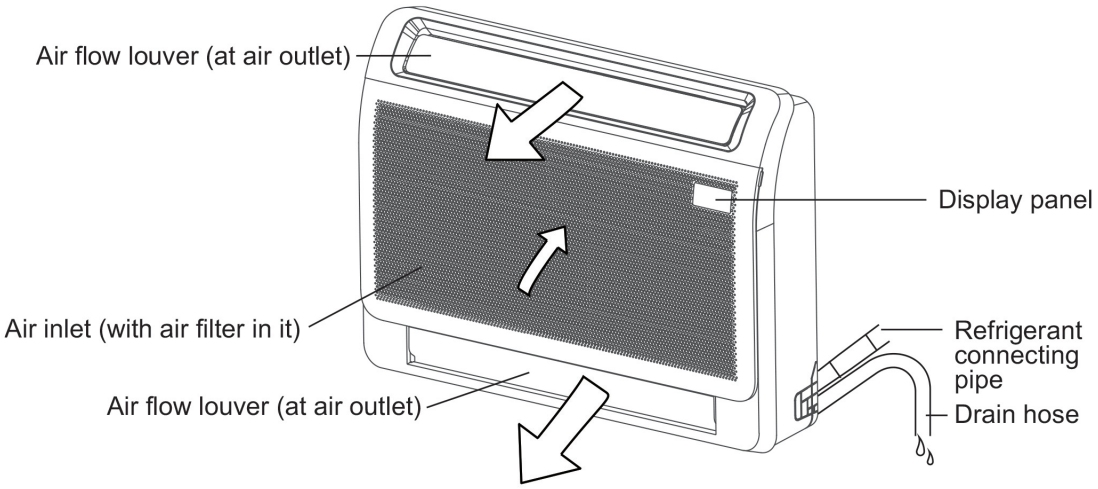




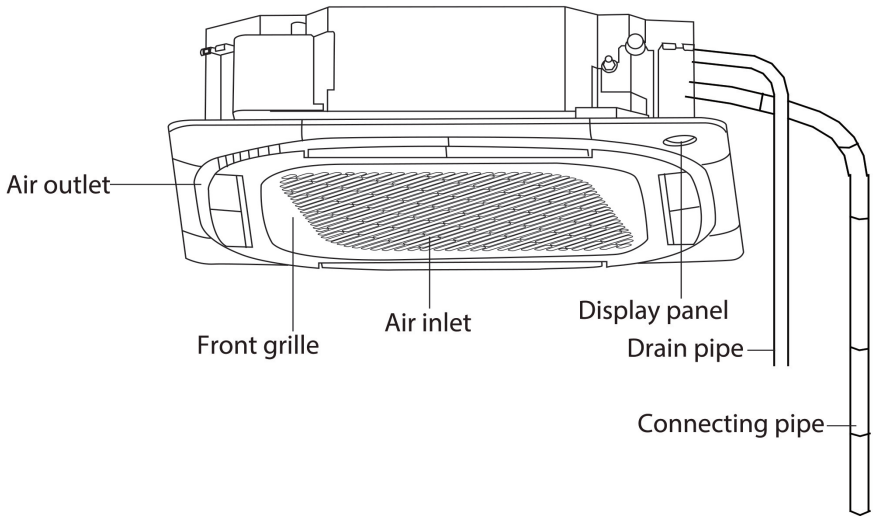


1. Air Inlet
2. Air Outlet
3. Electric Control Box
4. Drain Pipe
5. Refrigerant Piping (purchase separately)
6. Remote Controller (purchase separately)
7. Remote controller holder (purchase separately)
8. Wired remote controller

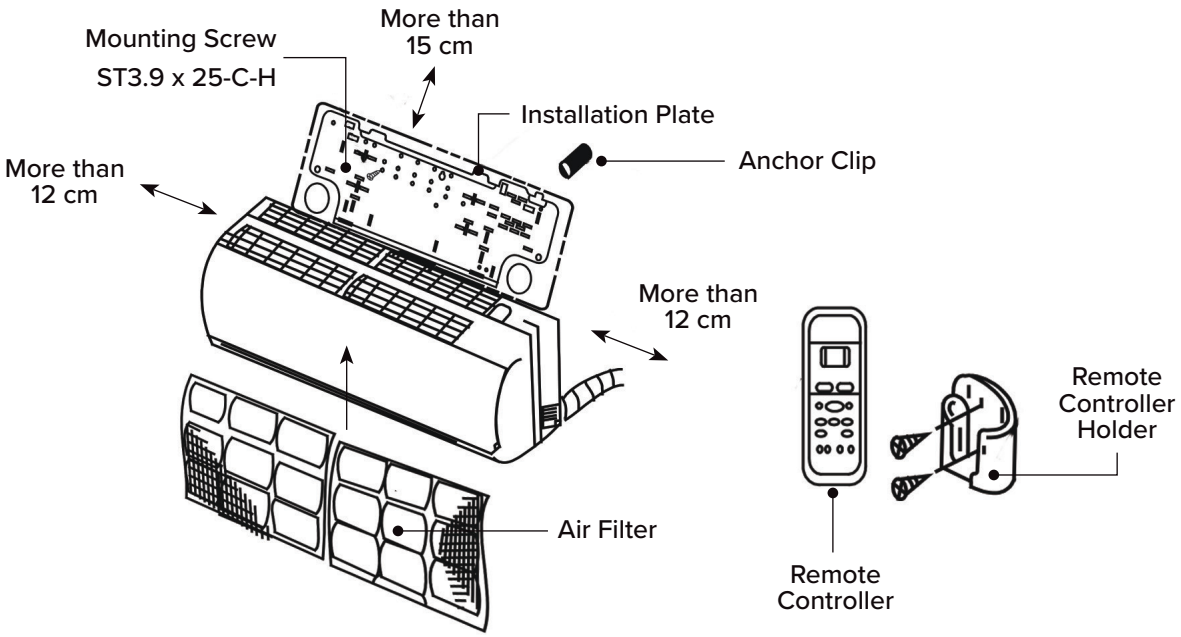
4.2. Console Type



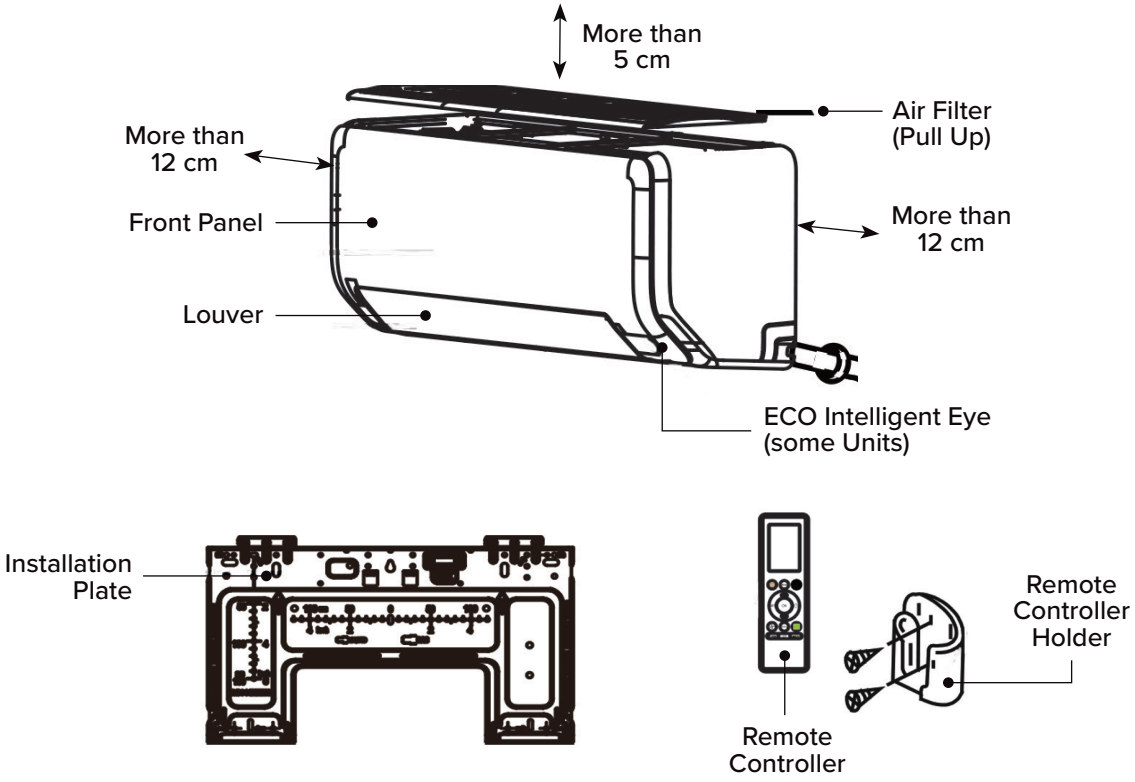
4.3. Compact Cassette Type



4.4. Wall Mounted Type NDHAS22B



4.5. Wall Mounted Type NDHAS26B



5. Indoor Unit Combination

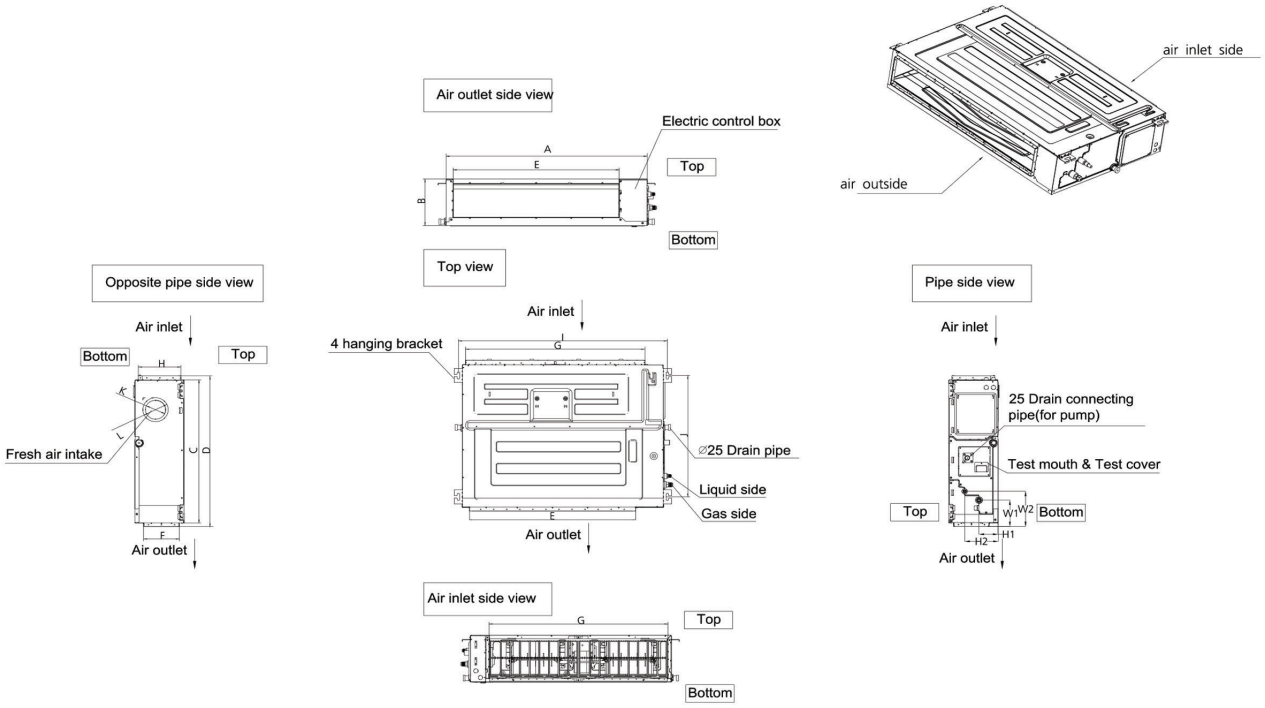
Avaliable Indoor	Two Units	Three Units	NDHAMBB-27-O 4 Units	NDHAMBB-36-O 5 Units	NDHAMBB-48-O 6 Units
Wall Mounted, Console, Cassette, Duct: 6K/9K/12K/18K/24K	9+18	6+6+24	6+6+6+6	6+6+6+6+6	6+6+6+6+6+6
	9+24	6+9+12	6+6+6+9	6+6+6+6+9	6+6+6+6+6+9
	12+12	6+9+18	6+6+6+18	6+6+6+6+12	6+6+6+6+6+12
	12+18	6+9+24	6+6+6+24	6+6+6+6+18	6+6+6+6+6+18
	12+24	6+12+18	6+6+9+9	6+6+6+6+24	6+6+6+6+9+9
	18+18	6+12+24	6+6+9+12	6+6+6+9+9	6+6+6+6+9+12
	18+24	6+18+18	6+6+9+18	6+6+6+9+12	6+6+6+6+9+18
	24+24	6+18+24	6+6+9+24	6+6+6+9+18	6+6+6+6+12+12
		9+9+9	6+6+12+12	6+6+6+9+24	6+6+6+6+12+18
		9+9+12	6+6+12+18	6+6+6+12+12	6+6+6+9+9+9
		9+9+18	6+6+12+24	6+6+6+12+18	6+6+6+9+9+12
		9+9+24	6+6+18+18	6+6+6+12+24	6+6+6+9+9+18
		9+12+12	6+6+18+24	6+6+6+18+18	6+6+6+9+12+12
		9+12+18	6+9+9+9	6+6+6+18+24	6+6+6+9+12+18
		9+12+24	6+9+9+12	6+6+9+9+9	6+6+6+12+12+12
		9+18+18	6+9+9+18	6+6+9+9+12	6+6+6+12+12+18
		9+18+24	6+9+9+24	6+6+9+9+18	6+6+9+9+9+9
		12+12+12	6+9+12+12	6+6+9+9+24	6+6+9+9+9+12
		12+12+18	6+9+12+18	6+6+9+12+12	6+6+9+9+9+18
		12+12+24	6+9+12+24	6+6+9+12+18	6+6+9+9+12+12
		12+18+18	6+9+18+18	6+6+9+12+24	6+6+9+9+12+18
		12+18+24	6+9+18+24	6+6+9+18+18	6+6+9+12+12+12
		18+18+18	6+12+12+12	6+6+9+18+24	6+6+9+12+12+18
			6+12+12+18	6+6+12+12+12	6+9+9+9+9+9
			6+12+12+24	6+6+12+12+18	6+9+9+9+9+12
			6+12+18+18	6+6+12+12+24	6+9+9+9+9+18
			6+12+18+24	6+6+12+18+18	6+9+9+9+12+12
			9+9+9+9	6+9+9+9+9	6+9+9+9+12+18
			9+9+9+12	6+9+9+9+12	6+9+9+12+12+12
			9+9+9+18	6+9+9+9+18	9+9+9+9+9+9
			9+9+9+24	6+9+9+9+24	9+9+9+9+9+12
			9+9+12+12	6+9+9+12+12	9+9+9+9+9+18
			9+9+12+18	6+9+9+12+18	9+9+9+9+12+12
			9+9+12+24	6+9+9+12+24	9+9+9+12+12+12
			9+9+18+18	6+9+9+18+18	
			9+9+18+24	6+9+12+12+12	

Avaliable Indoor	Two Units	Three Units	NDHAMBB-27-O 4 Units	NDHAMBB-36-O 5 Units	NDHAMBB-48-O 6 Units
Wall Mounted, Console, Cassette, Duct: 6K/9K/12K/18K/24K				6+9+12+12+18	
				6+9+12+12+24	
				6+9+12+18+18	
				6+12+12+12+12	
				6+12+12+12+18	
				9+9+9+9+9	
				9+9+9+9+12	
				9+9+9+9+18	
				9+9+9+9+24	
				9+9+9+12+12	
				9+9+9+12+18	
				9+9+9+12+24	
				9+9+9+18+18	
				9+9+12+12+12	
				9+9+12+12+18	
				9+12+12+12+12	
				9+12+12+12+18	
				12+12+12+12+12	

6. Dimensional Drawings

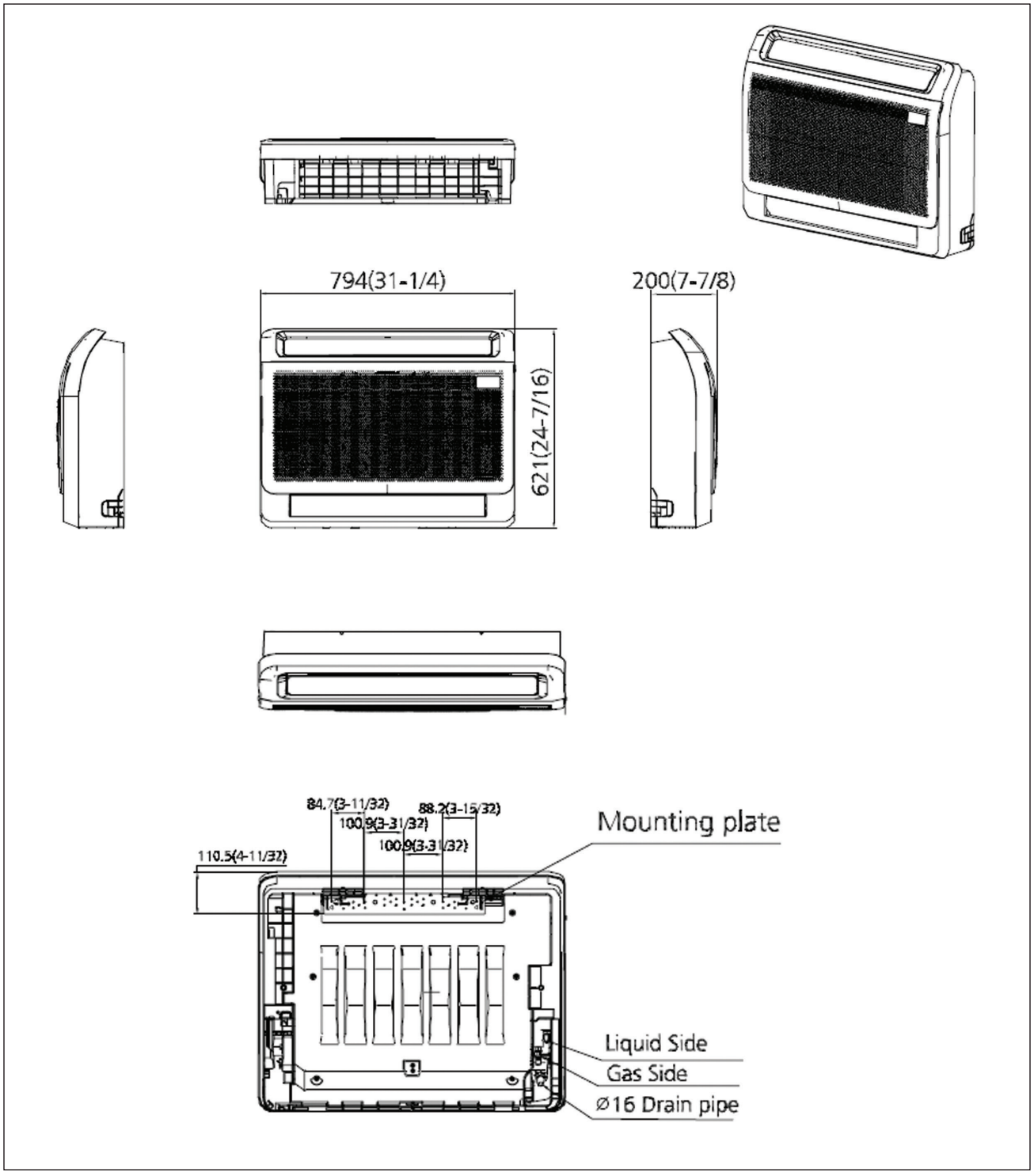
6.1. Indoor Unit

6.1.1. High Static Slim Duct Type

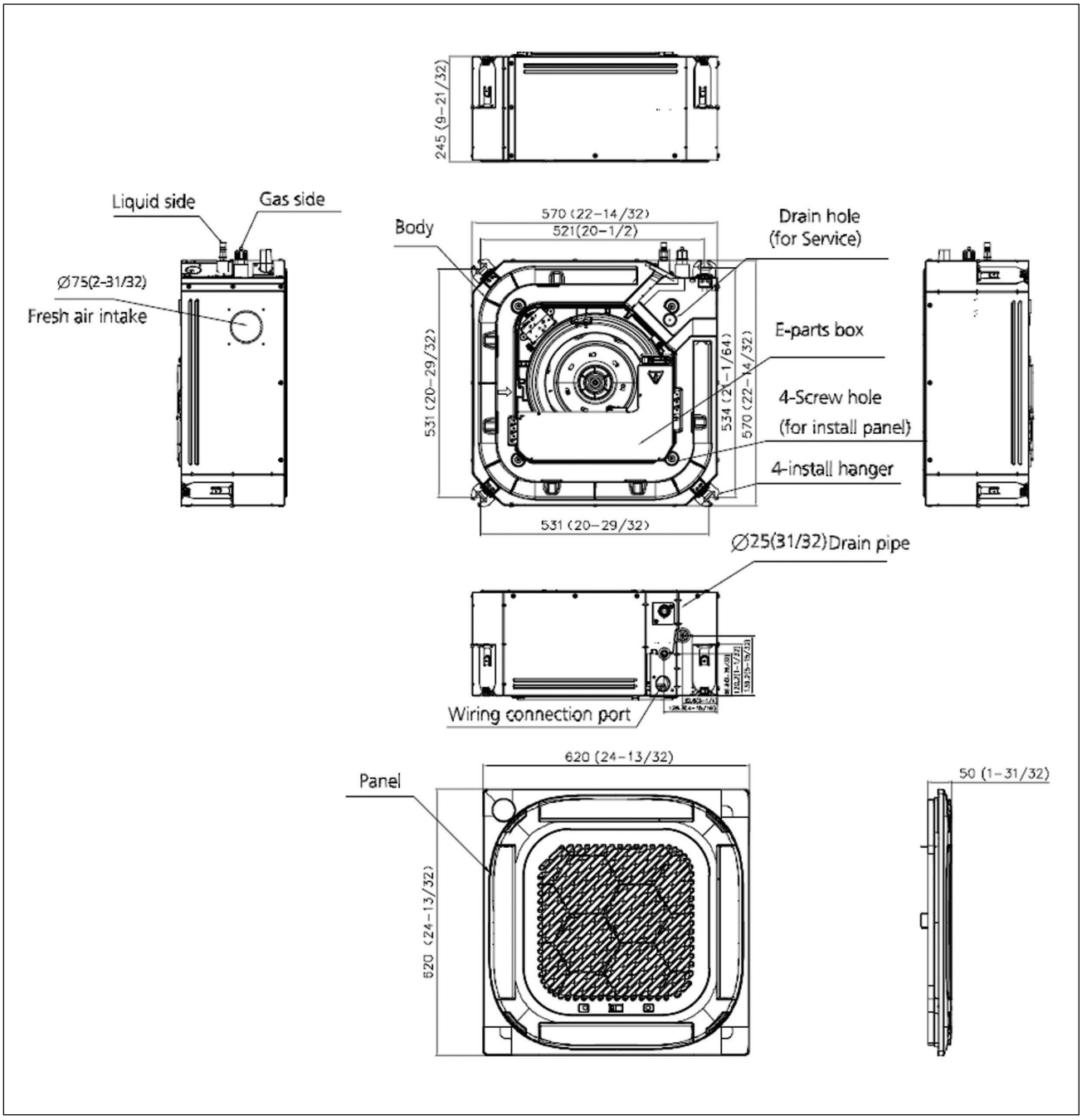


Capacity (kBtu/h)	Units	Outline Dimension				Air Outlet Opening Size		Air Return Opening Size		Size of Mounted Lug		Fresh Air Intake Opening Size		Size of Refrigerant Pipe			
		A	B	C	D	E	F	G	H	I	J	K	L	H1	H2	W1	W2
9/12	mm	700	245	750	795	527	178	592	212	740	640	100	126	72	144	120	165
	inch	27.6	9.6	29.5	31.3	20.7	7	23.3	8.3	29.1	25.2	3.9	5	2.8	5.7	4.7	6.5
18/24	mm	1000	245	750	795	827	178	892	212	1040	640	100	126	80	151	120	165
	inch	39.4	9.6	29.5	31.3	32.6	7	35.1	8.3	40.9	25.2	3.9	5	3.1	5.9	4.7	6.5

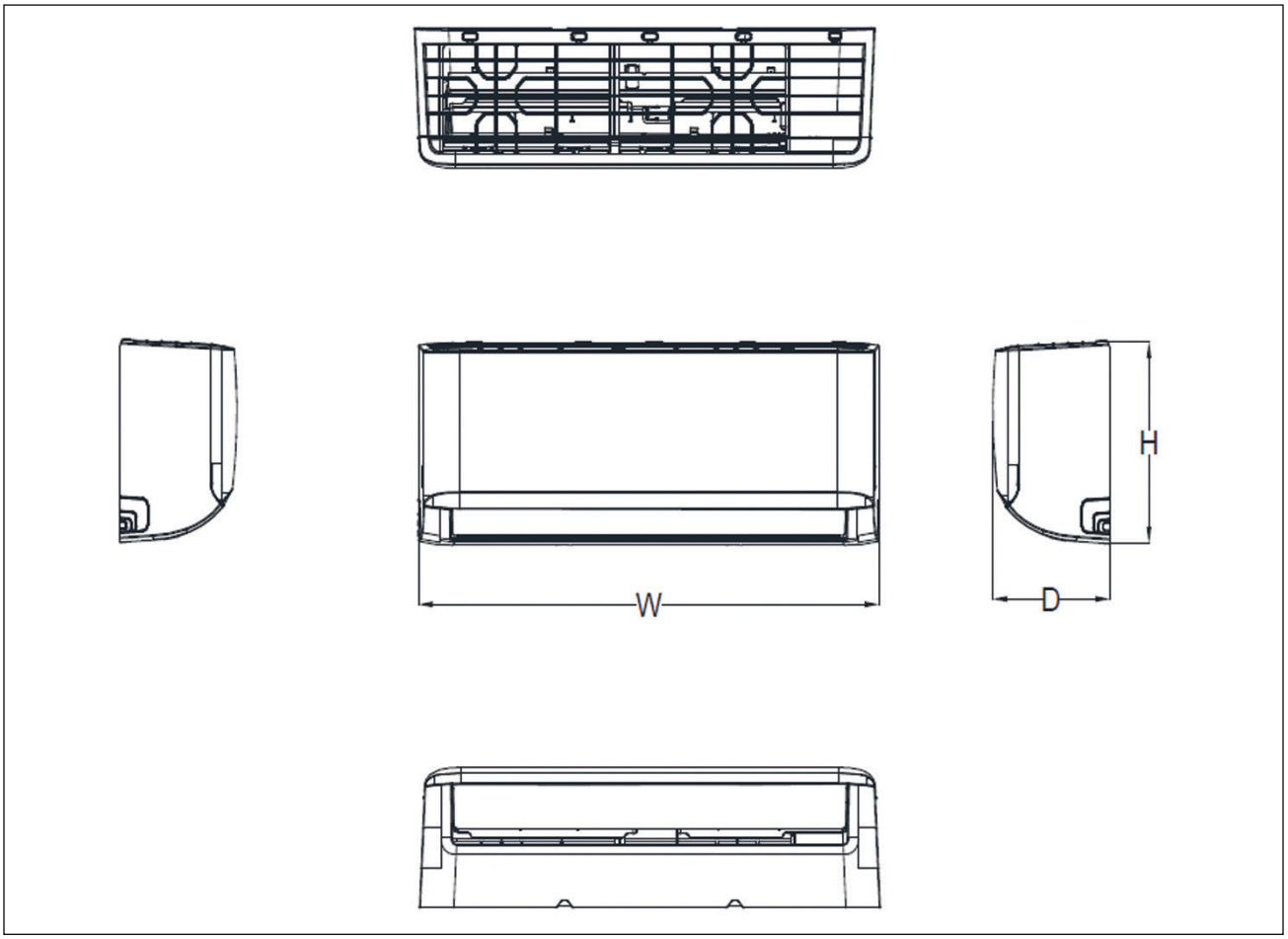
6.1.2. Console Type



6.1.3. Compact Cassette Type

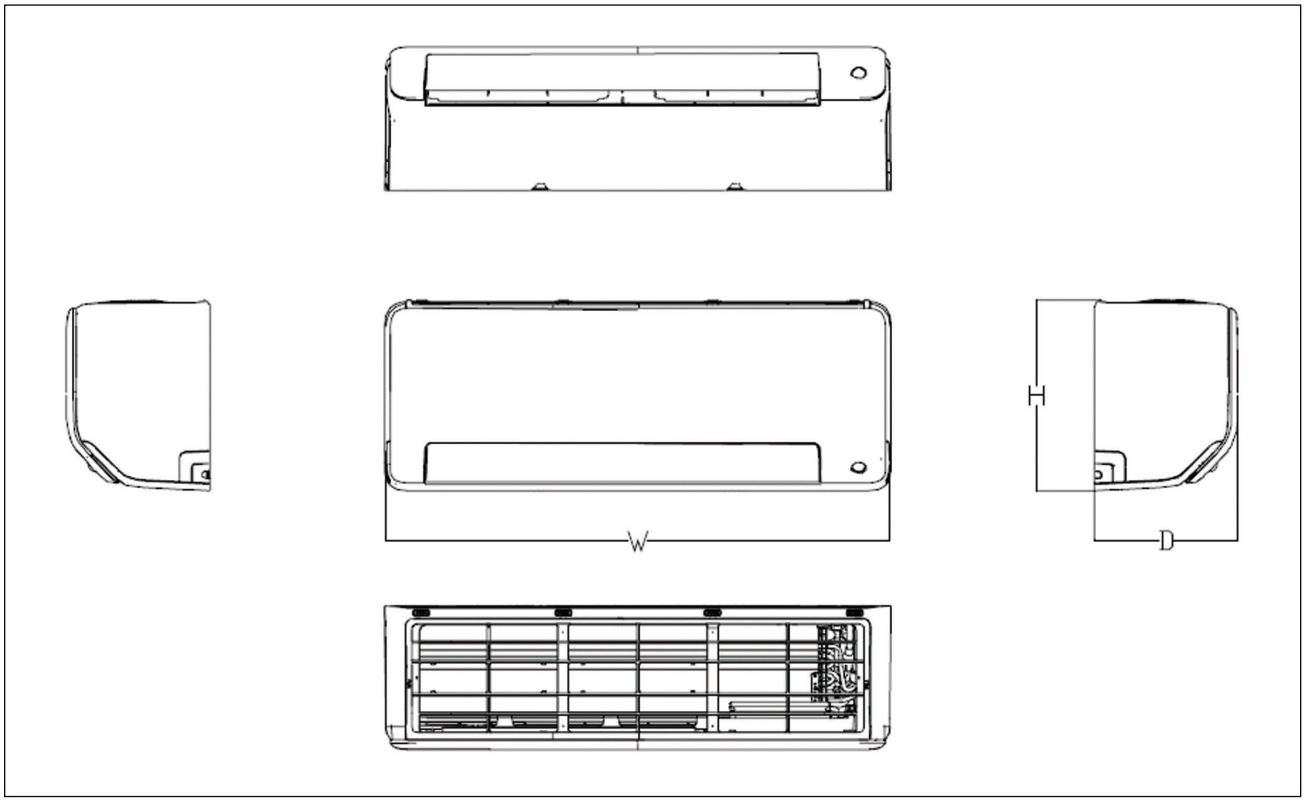


6.1.4. Premium High Wall



Model (kBtu/h)	W (mm/inch)	D (mm/inch)	H (mm/inch)
6	729/28.7	200/7.87	292/11.5
9~12	802/31.57	200/7.87	295/11.61
18~24	1082/42.6	234/9.21	337/13.27
33	1259/49.57	1259/49.57	362/14.25

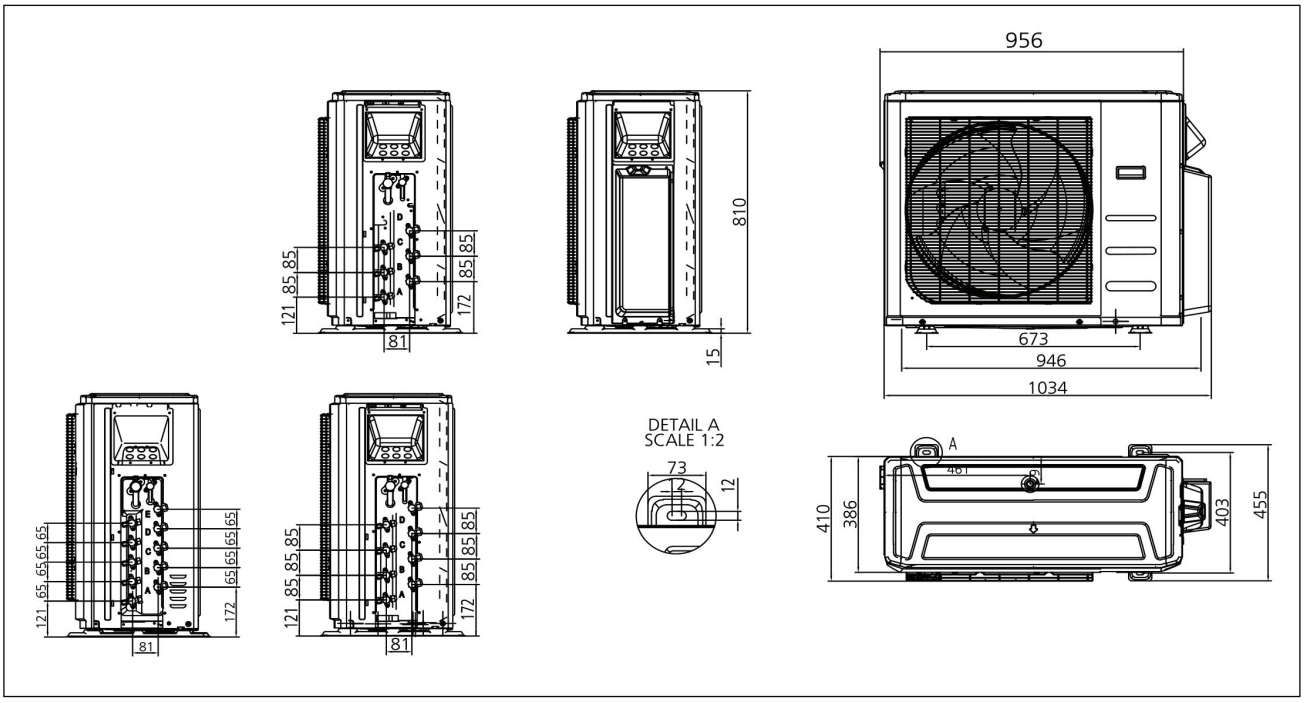
6.1.5. Ultimate High Wall



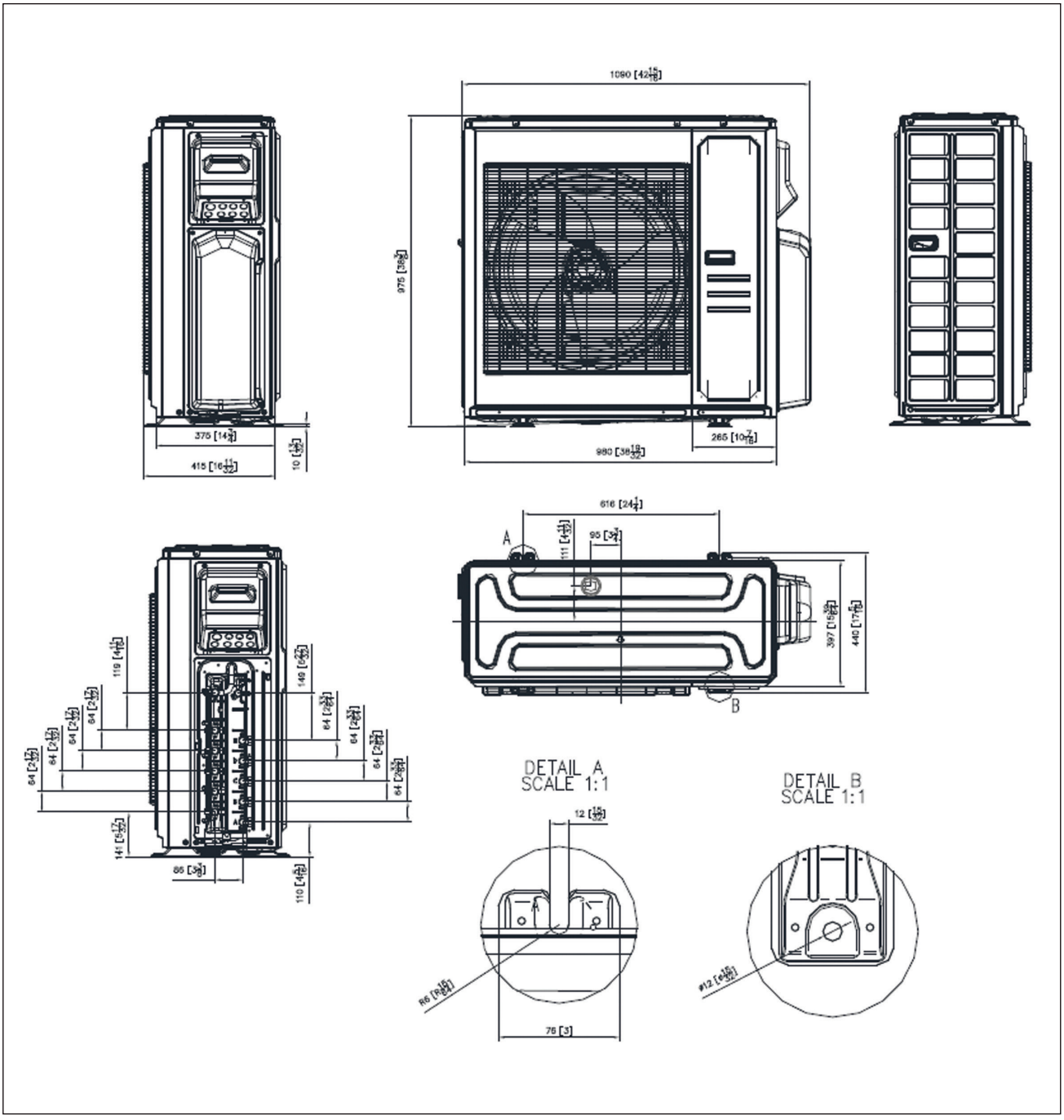
Model (kBtu/h)	W (mm/inch)	D (mm/inch)	H (mm/inch)
6k~12k	795/31.3	225/8.86	295/11.61
18k	965/38	239/9.41	319/12.56
24k~33k	1140/44.88	275/10.83	370/14.57

6.2. Outdoor Unit

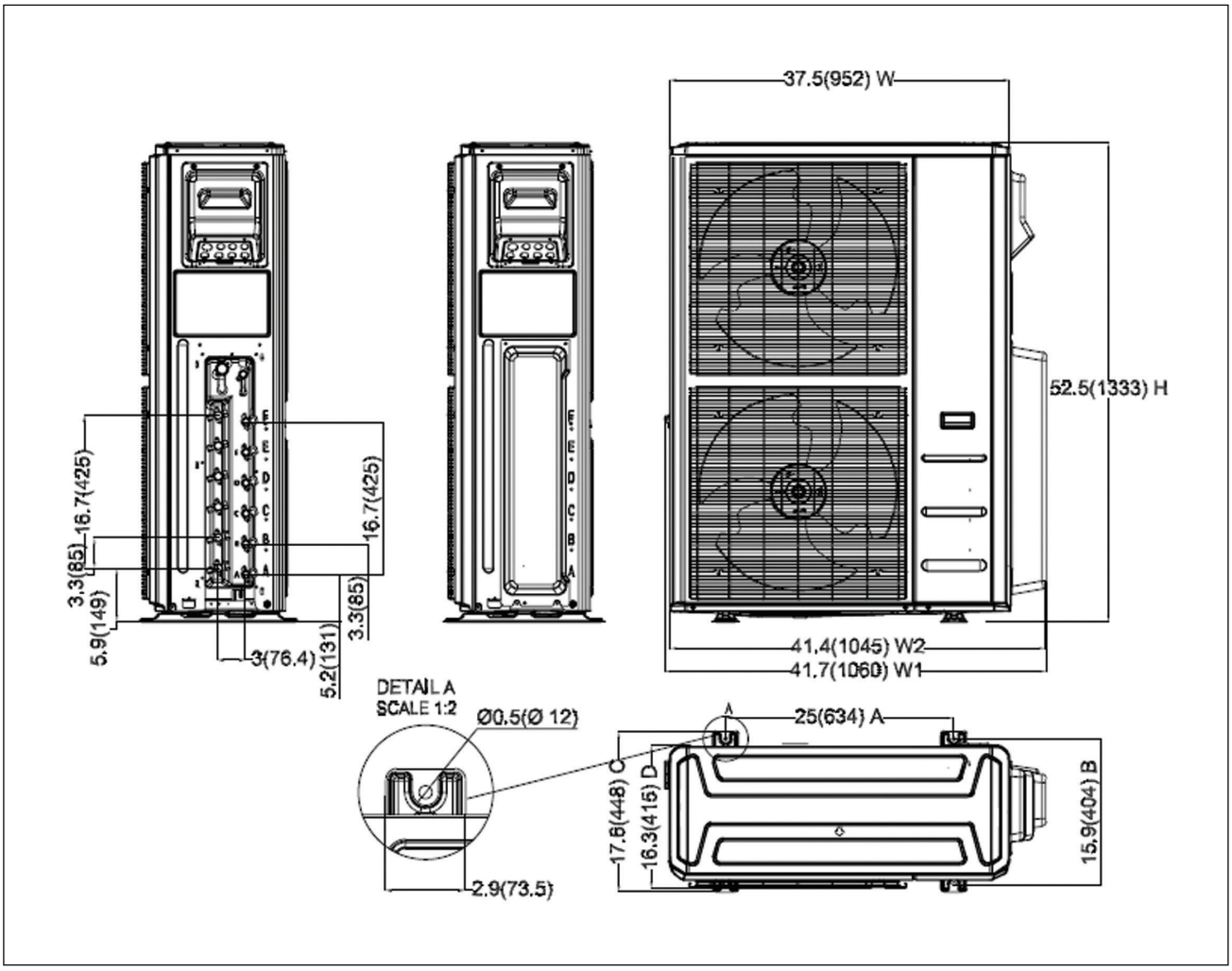
6.2.1. NDHAMBB-18-O



6.2.2. NDHAMBB-36-O

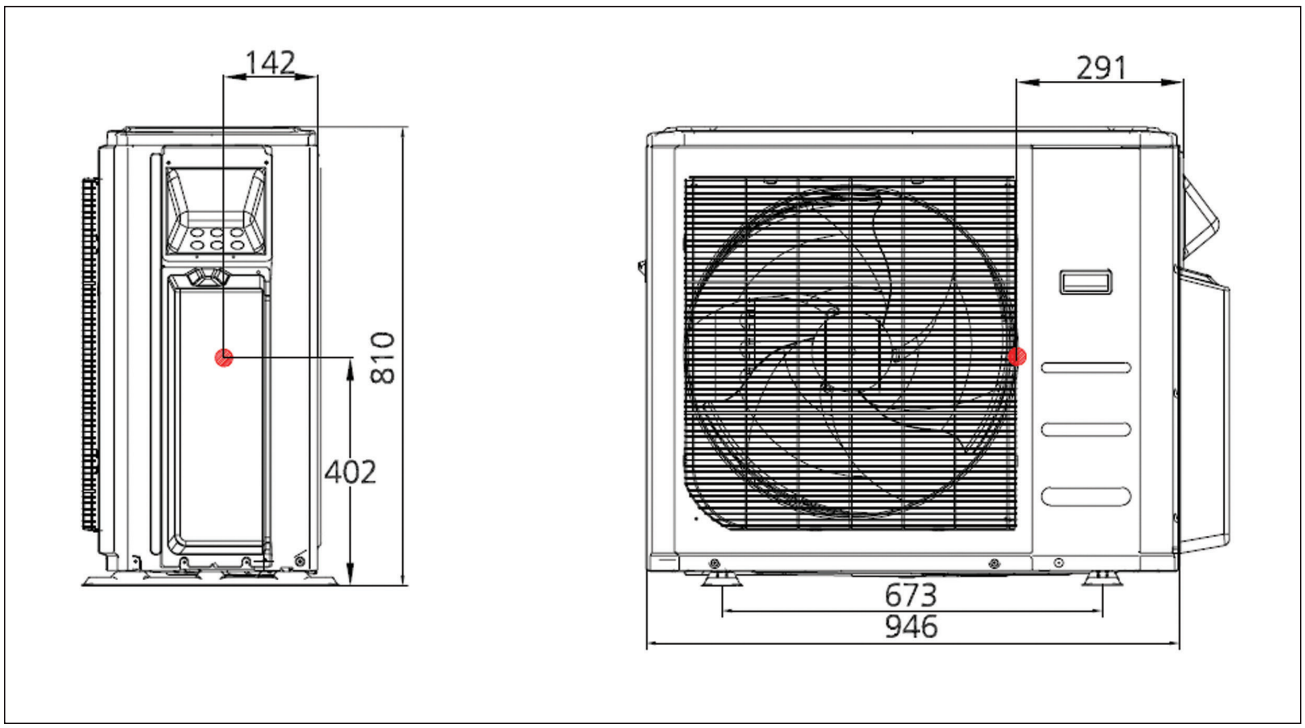


6.2.3. NDHAMBB-48-O

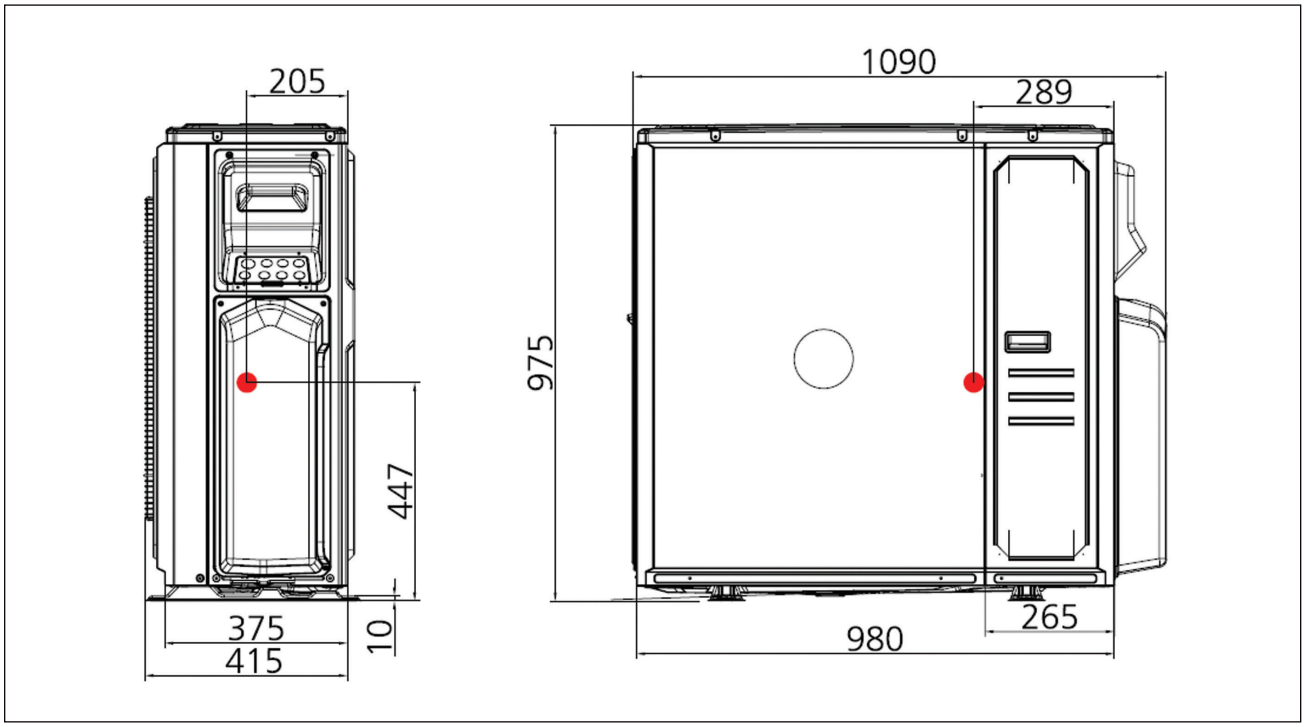


7. Centre of Gravity

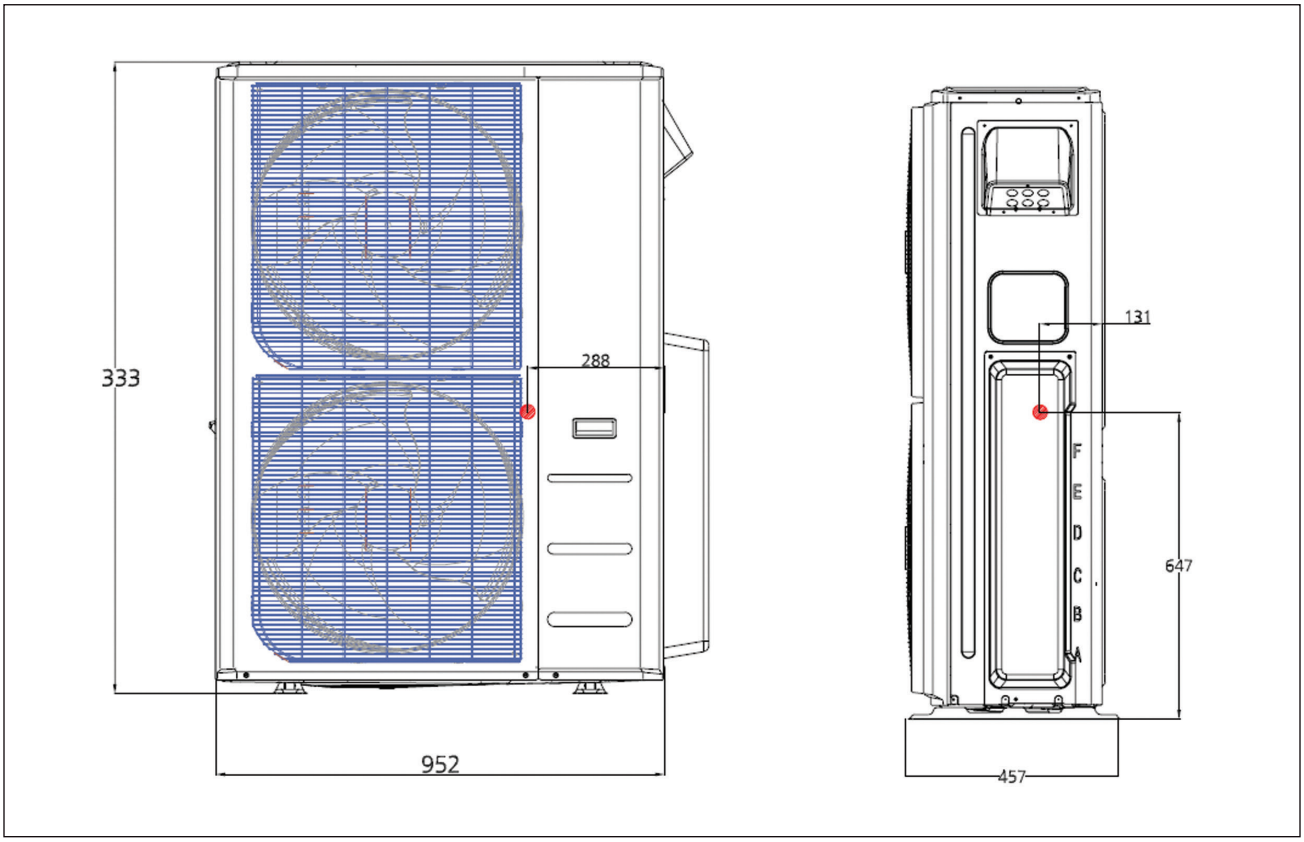
7.1. NDHAMBB-18-O, NDHAMBB-27-O



7.2. NDHAMBB-36-O



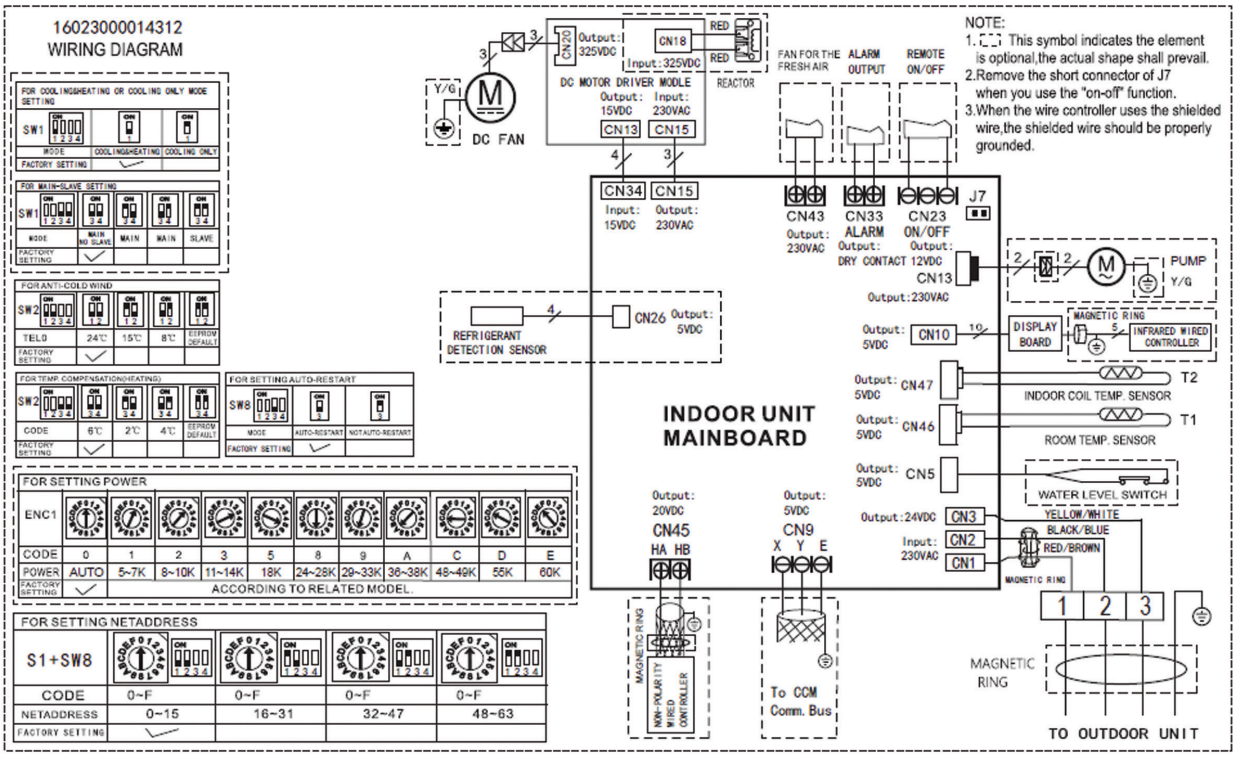
7.3. NDHAMBB-48-O



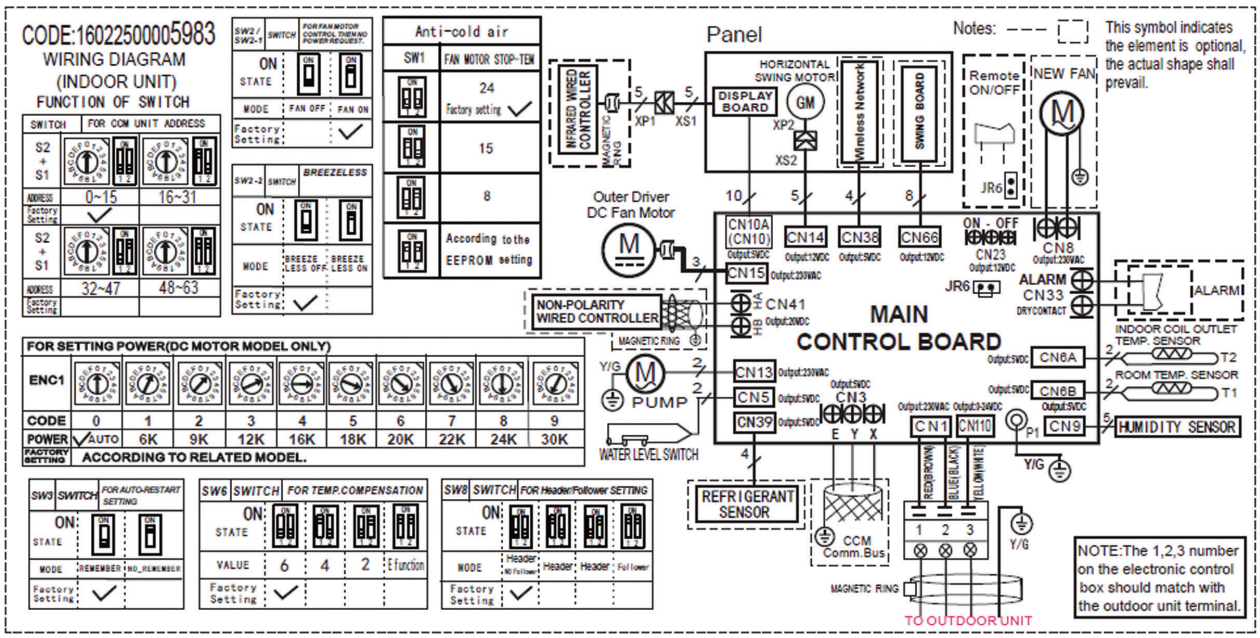
8. Electrical Wiring Diagrams

8.1. Indoor Unit

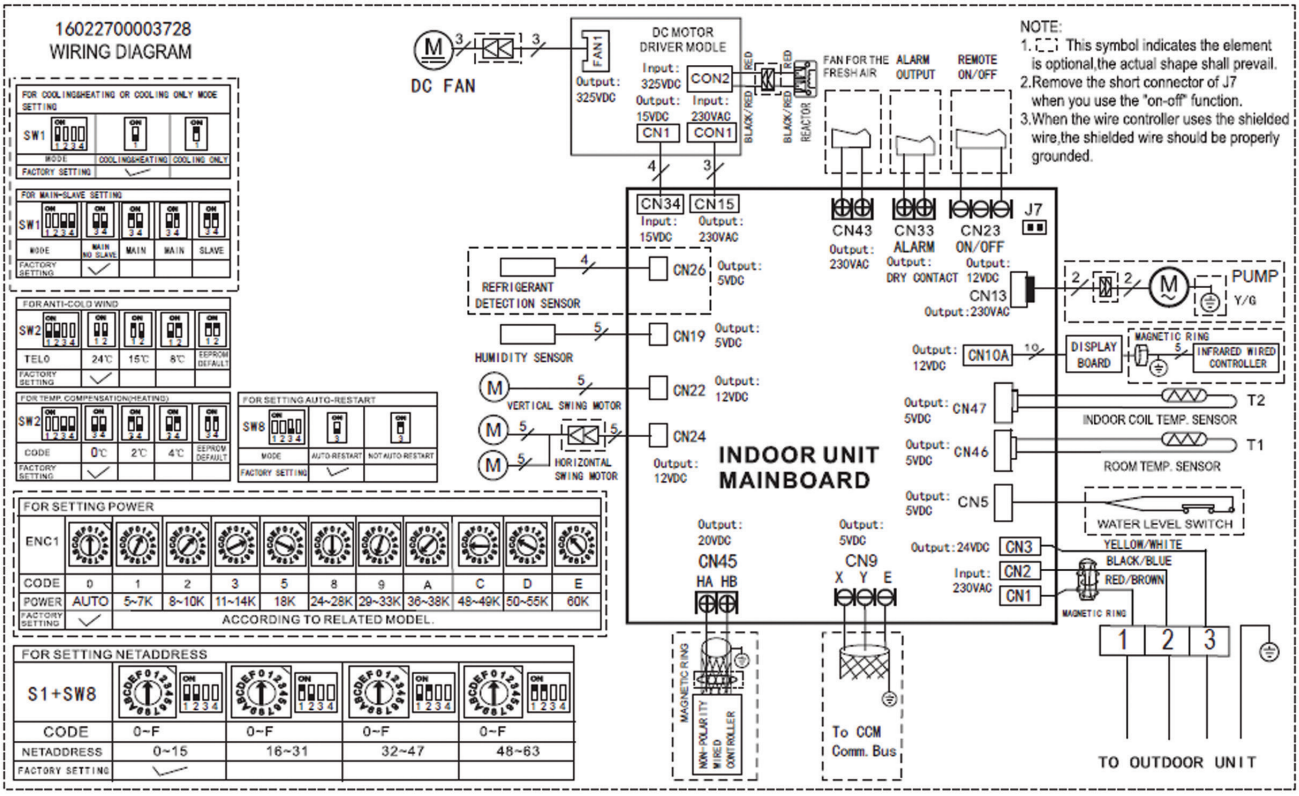
8.1.1. High Static Slim Duct Type



8.1.2. Compact Cassette Type

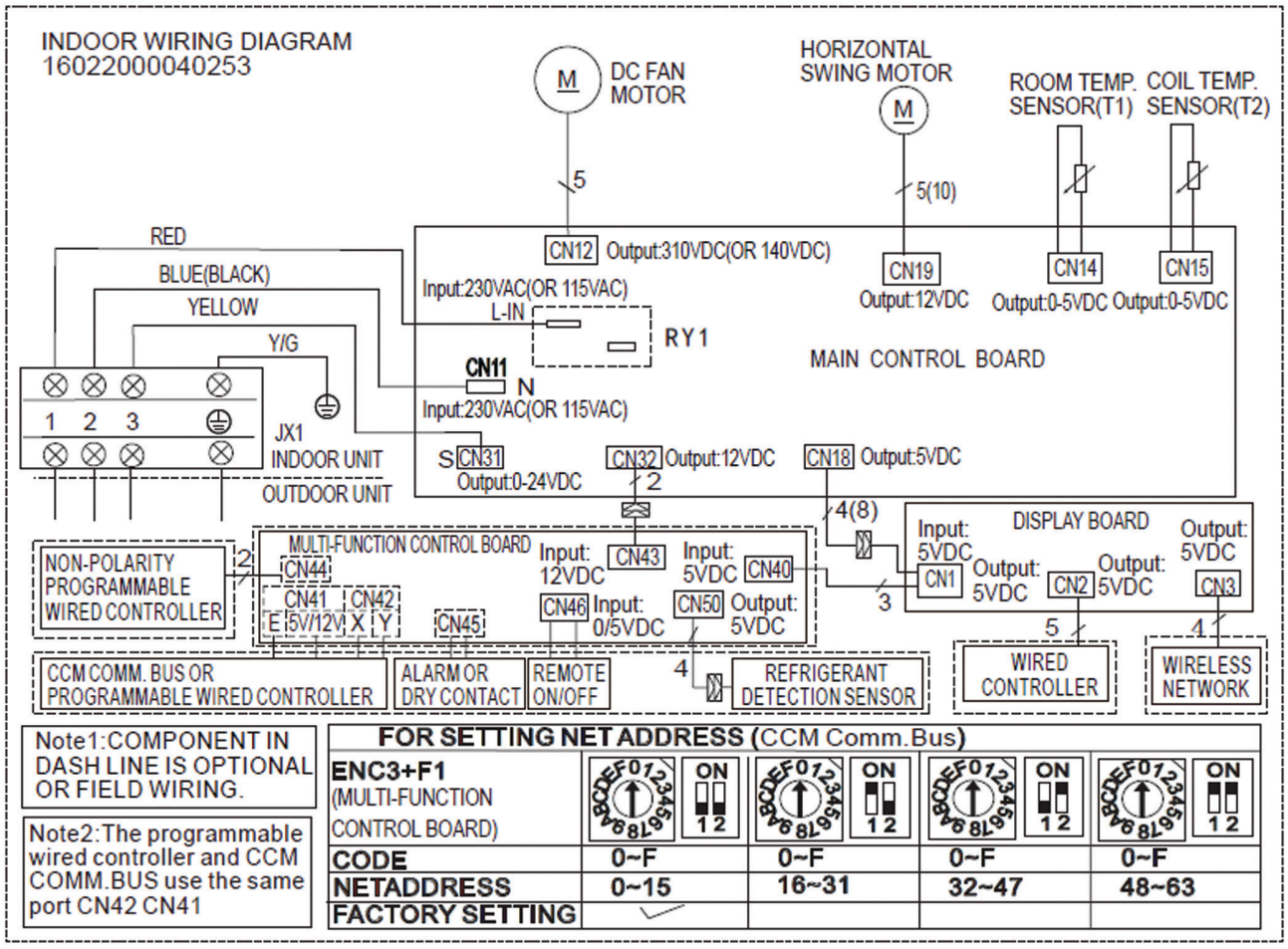


8.1.3. Floor Console Type

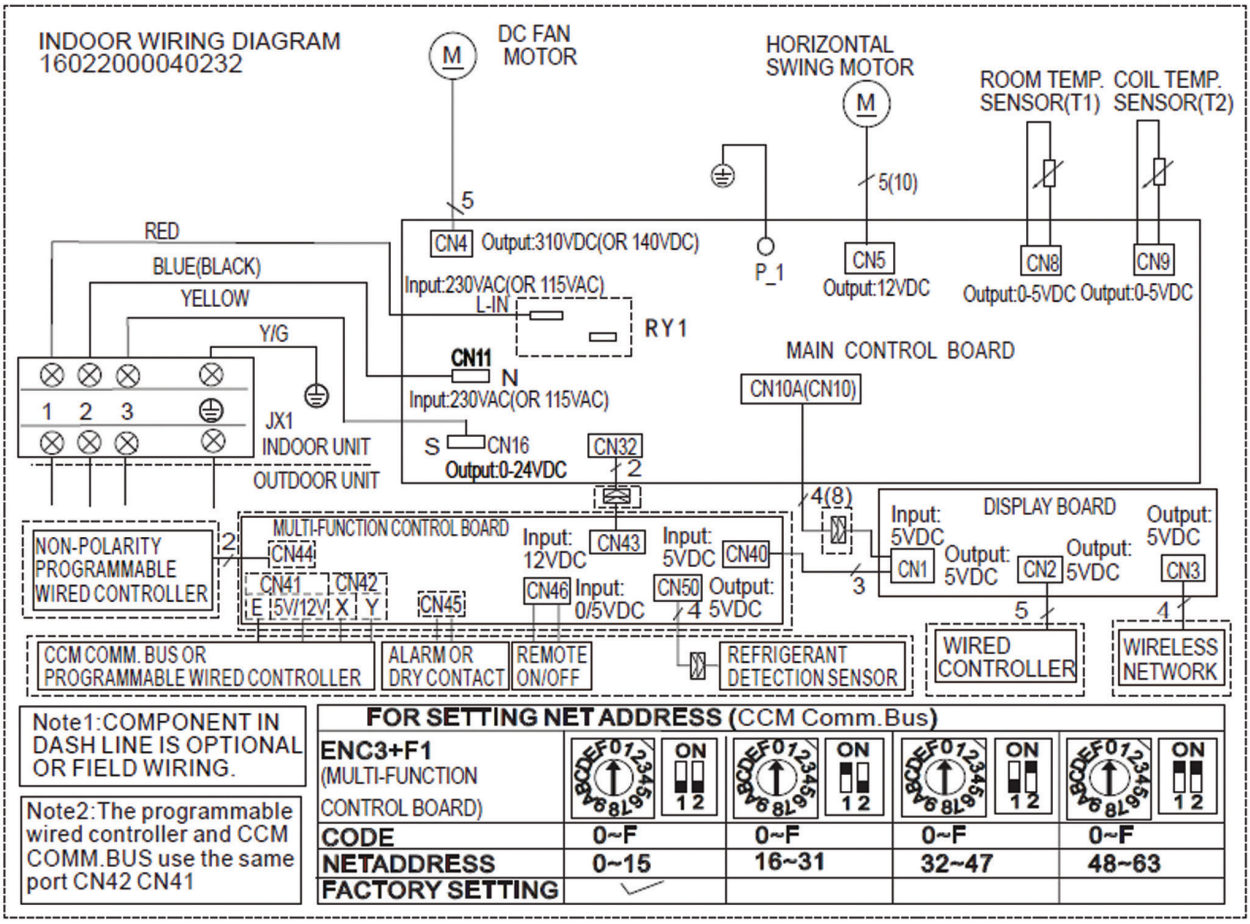


8.1.4. Premium High Wall

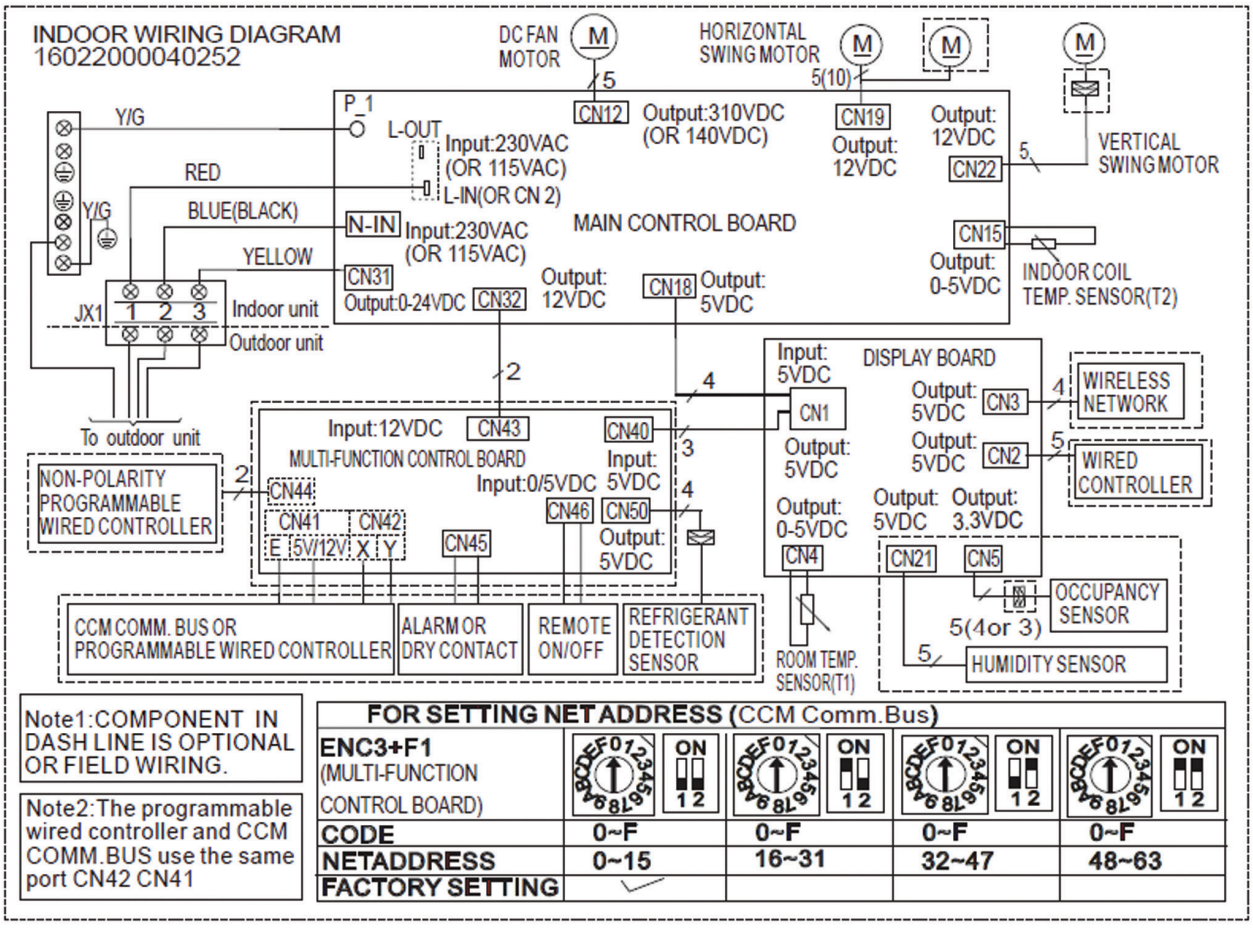
6k-12k



18k~33k

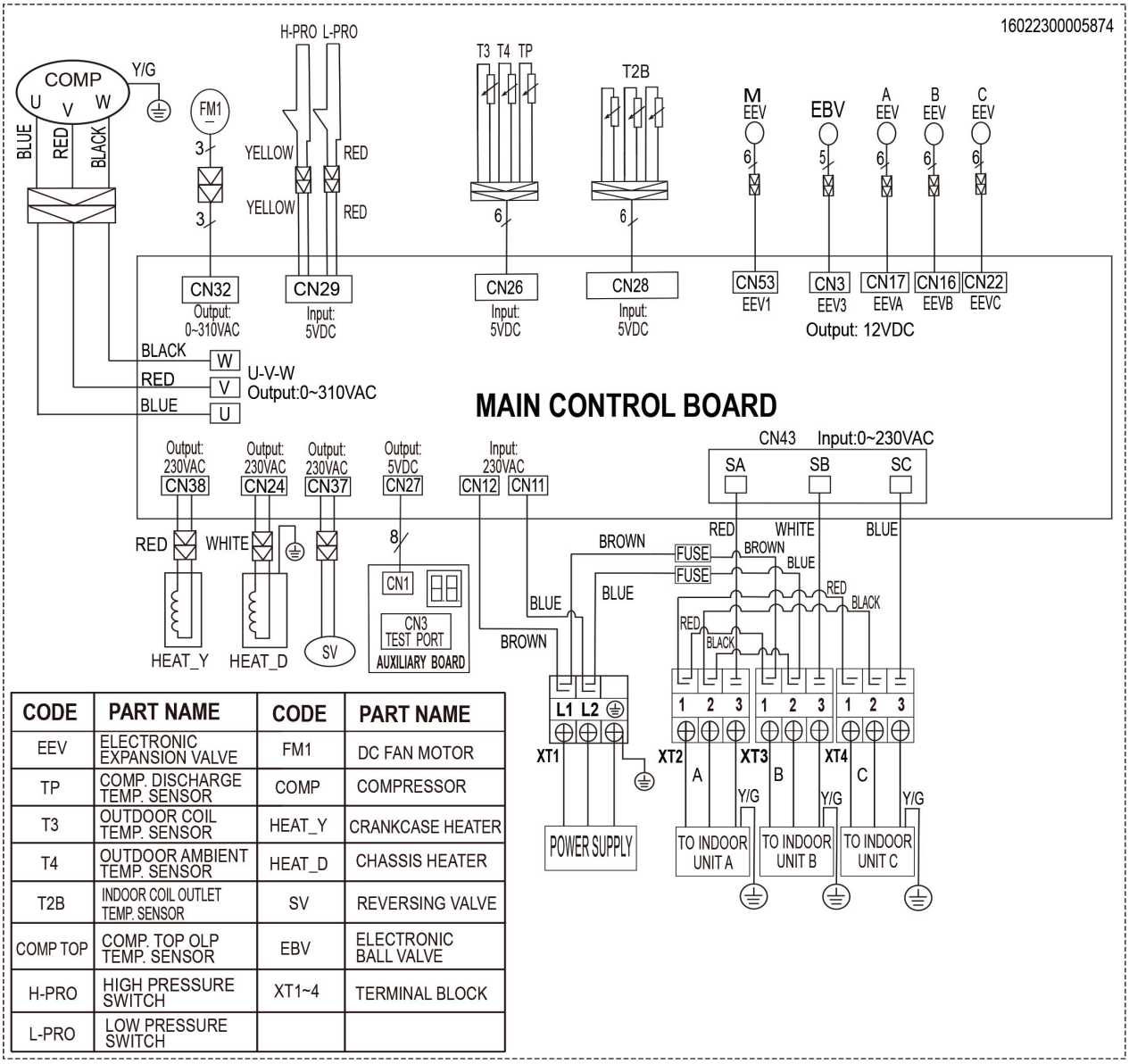

INDOOR WIRING DIAGRAM
16022000040232
DC FAN MOTOR
HORIZONTAL SWING MOTOR
ROOM TEMP. SENSOR(T1)
COIL TEMP. SENSOR(T2)
RED
BLUE(BLACK)
YELLOW
Y/G
CN4 Output:310VDC(OR 140VDC)
Input:230VAC(OR 115VAC)
L-IN
RY1
CN11
N
Input:230VAC(OR 115VAC)
S
CN16
Output:0-24VDC
CN32
P_1
CN5
Output:12VDC
CN8
Output:0-5VDC
CN9
Output:0-5VDC
MAIN CONTROL BOARD
CN10A(CN10)
JX1
INDOOR UNIT
OUTDOOR UNIT
NON-POLARITY PROGRAMMABLE WIRED CONTROLLER
MULTI-FUNCTION CONTROL BOARD
CN44
CN41
CN42
E 5V/12V X Y
CN45
Input: 12VDC
CN43
Input: 5VDC
CN40
CN46
Input: 0/5VDC
CN50
Output: 5VDC
DISPLAY BOARD
Input: 5VDC
CN1
Output: 5VDC
CN2
Output: 5VDC
Output: 5VDC
CN3
CCM COMM. BUS OR PROGRAMMABLE WIRED CONTROLLER
ALARM OR DRY CONTACT
REMOTE ON/OFF
REFRIGERANT DETECTION SENSOR
WIRED CONTROLLER
WIRELESS NETWORK
Note1:COMPONENT IN DASH LINE IS OPTIONAL OR FIELD WIRING.
Note2:The programmable wired controller and CCM COMM.BUS use the same port CN42 CN41
FOR SETTING NET ADDRESS (CCM Comm.Bus)
ENC3+F1 (MULTI-FUNCTION CONTROL BOARD)
ON
CODE
0~F
0~F
0~F
0~F
NETADDRESS
0~15
16~31
32~47
48~63
FACTORY SETTING

8.1.5. Ultimate High Wall



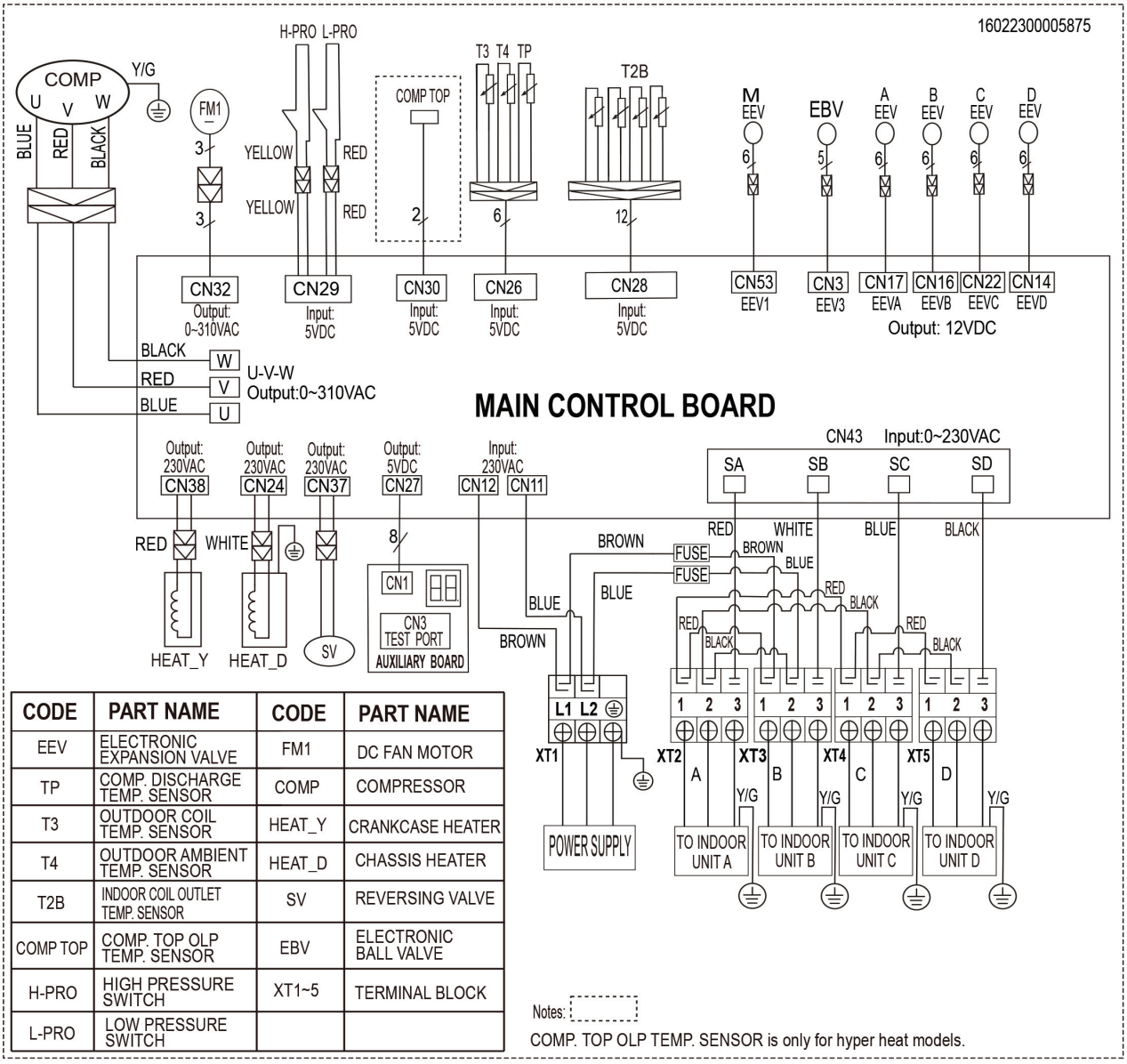
8.2. Outdoor Unit

8.2.1. NDHAMBB-18-O



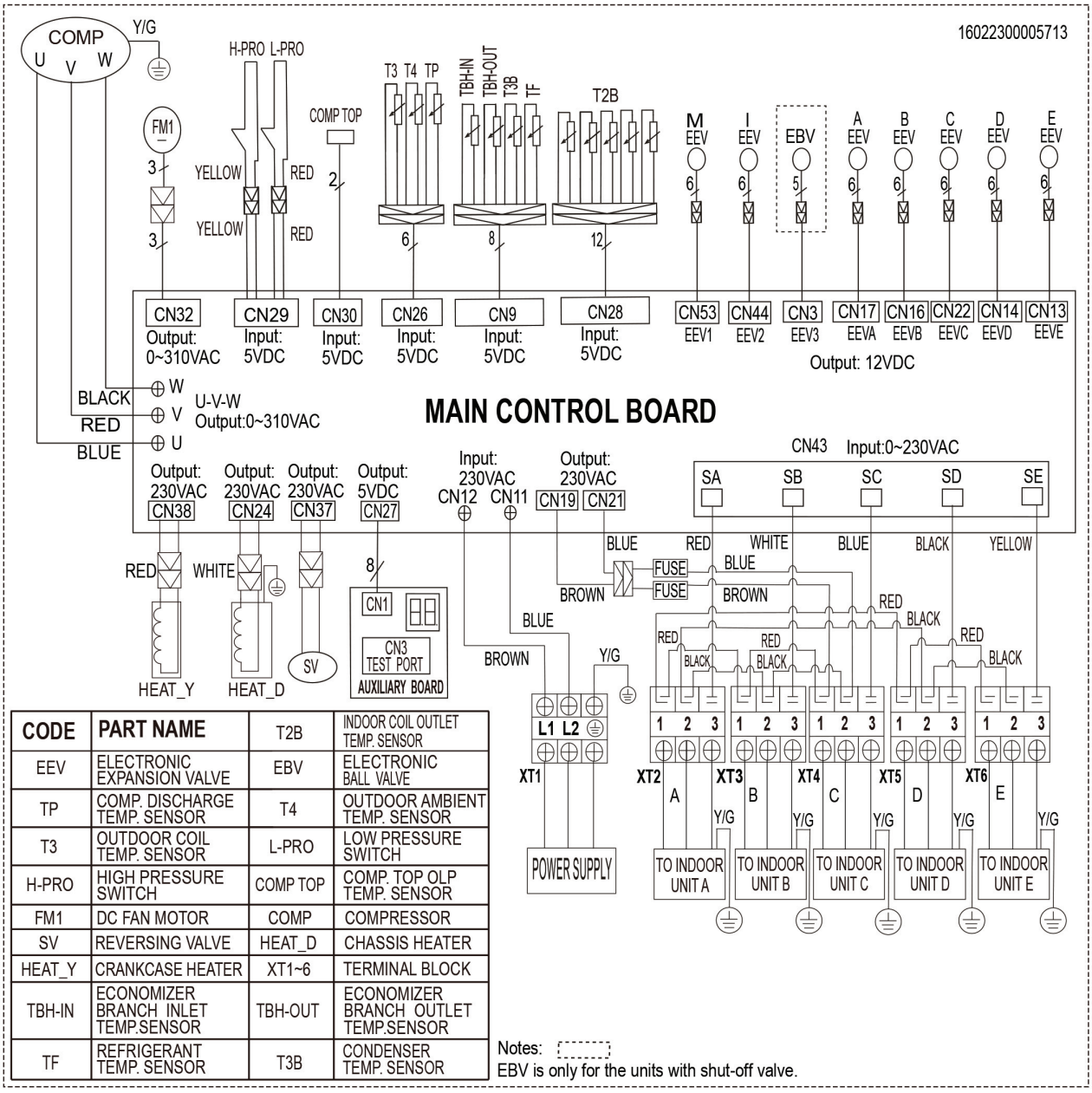
CODE	PART NAME	CODE	PART NAME
EEV	ELECTRONIC EXPANSION VALVE	FM1	DC FAN MOTOR
TP	COMP. DISCHARGE TEMP. SENSOR	COMP	COMPRESSOR
T3	OUTDOOR COIL TEMP. SENSOR	HEAT_Y	CRANKCASE HEATER
T4	OUTDOOR AMBIENT TEMP. SENSOR	HEAT_D	CHASSIS HEATER
T2B	INDOOR COIL OUTLET TEMP. SENSOR	SV	REVERSING VALVE
COMP TOP	COMP. TOP OLP TEMP. SENSOR	EBV	ELECTRONIC BALL VALVE
H-PRO	HIGH PRESSURE SWITCH	XT1~4	TERMINAL BLOCK
L-PRO	LOW PRESSURE SWITCH		

8.2.2. NDHAMBB-27-O



CODE	PART NAME	CODE	PART NAME
EEV	ELECTRONIC EXPANSION VALVE	FM1	DC FAN MOTOR
TP	COMP. DISCHARGE TEMP. SENSOR	COMP	COMPRESSOR
T3	OUTDOOR COIL TEMP. SENSOR	HEAT_Y	CRANKCASE HEATER
T4	OUTDOOR AMBIENT TEMP. SENSOR	HEAT_D	CHASSIS HEATER
T2B	INDOOR COIL OUTLET TEMP. SENSOR	SV	REVERSING VALVE
COMP TOP	COMP. TOP OLP TEMP. SENSOR	EBV	ELECTRONIC BALL VALVE
H-PRO	HIGH PRESSURE SWITCH	XT1~5	TERMINAL BLOCK
L-PRO	LOW PRESSURE SWITCH		

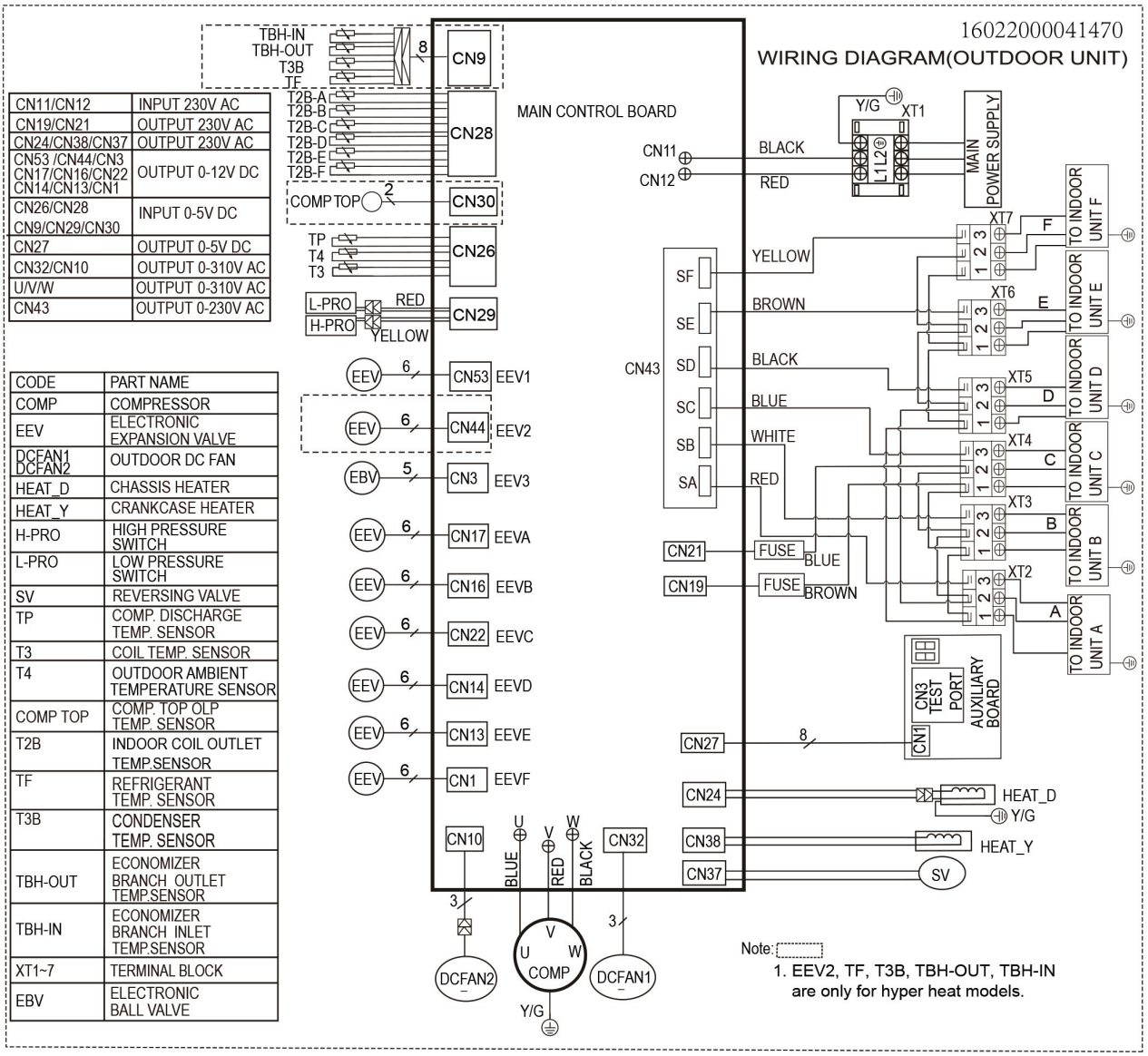
8.2.3. NDHAMBB-36-O



CODE	PART NAME	T2B	INDOOR COIL OUTLET TEMP. SENSOR
EEV	ELECTRONIC EXPANSION VALVE	EBV	ELECTRONIC BALL VALVE
TP	COMP. DISCHARGE TEMP. SENSOR	T4	OUTDOOR AMBIENT TEMP. SENSOR
T3	OUTDOOR COIL TEMP. SENSOR	L-PRO	LOW PRESSURE SWITCH
H-PRO	HIGH PRESSURE SWITCH	COMP TOP	COMP. TOP OLP TEMP. SENSOR
FM1	DC FAN MOTOR	COMP	COMPRESSOR
SV	REVERSING VALVE	HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER	XT1~6	TERMINAL BLOCK
TBH-IN	ECONOMIZER BRANCH INLET TEMP.SENSOR	TBH-OUT	ECONOMIZER BRANCH OUTLET TEMP.SENSOR
TF	REFRIGERANT TEMP. SENSOR	T3B	CONDENSER TEMP. SENSOR

Notes:
EBV is only for the units with shut-off valve.

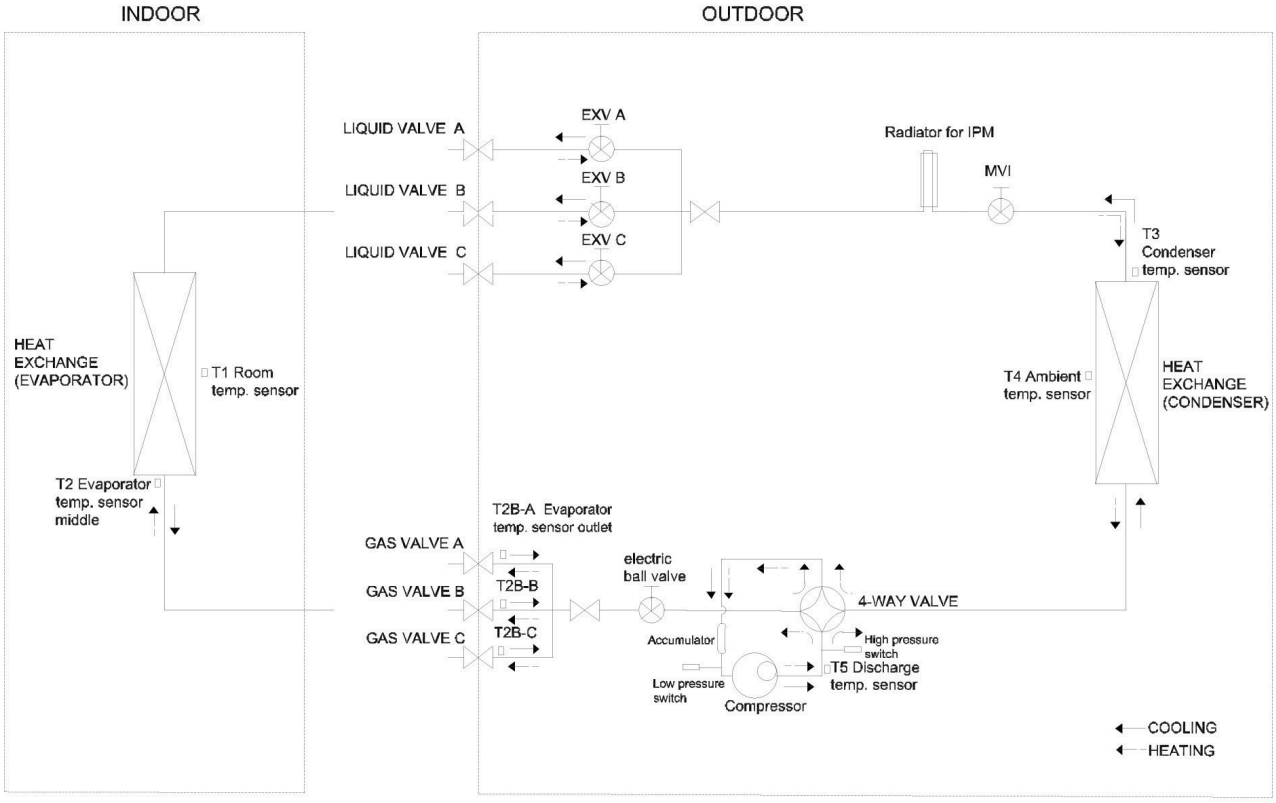
8.2.4. NDHAMBB-48-O



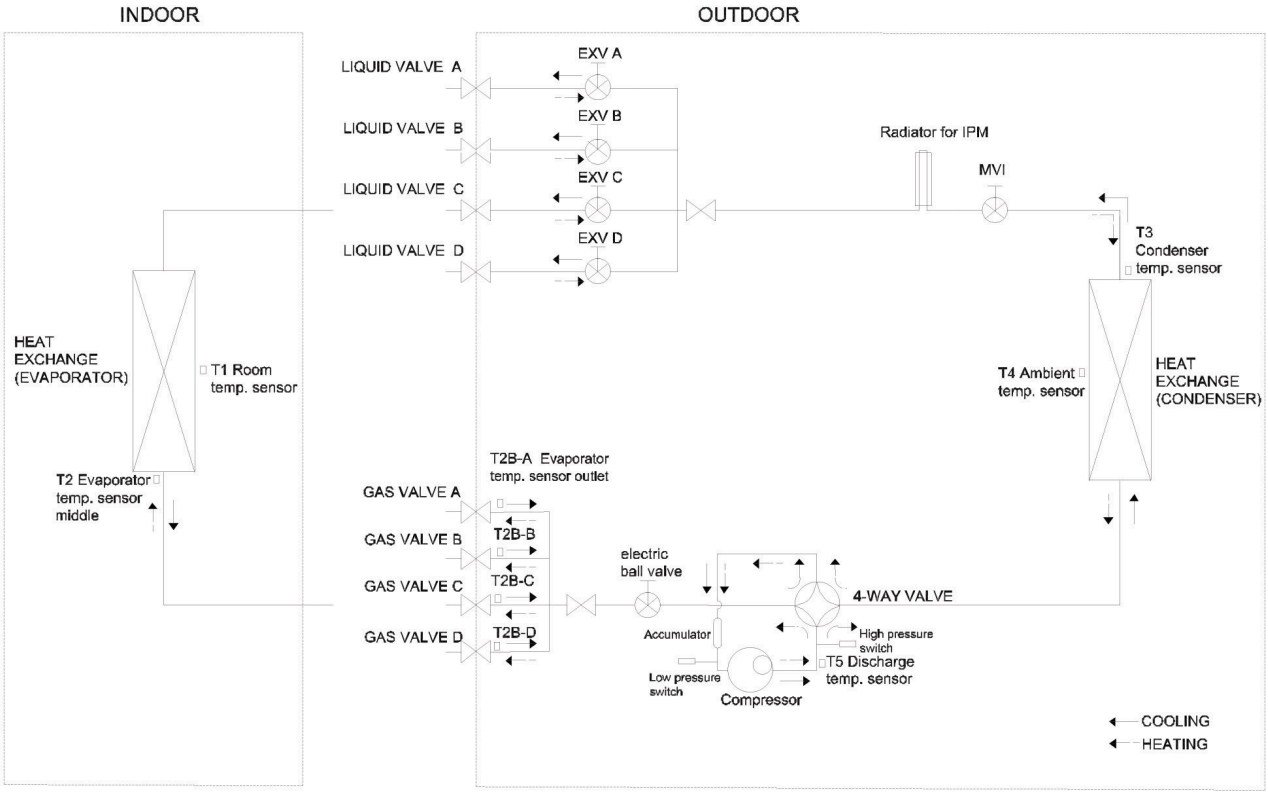
CN11/CN12	INPUT 230V AC
CN19/CN21	OUTPUT 230V AC
CN24/CN38/CN37	OUTPUT 230V AC
CN53 /CN44/CN3 CN17/CN16/CN22 CN14/CN13/CN1	OUTPUT 0-12V DC
CN26/CN28 CN9/CN29/CN30	INPUT 0-5V DC
CN27	OUTPUT 0-5V DC
CN32/CN10	OUTPUT 0-310V AC
U/V/W	OUTPUT 0-310V AC
CN43	OUTPUT 0-230V AC

CODE	PART NAME
COMP	COMPRESSOR
EEV	ELECTRONIC EXPANSION VALVE
DCFAN1 DCFAN2	OUTDOOR DC FAN
HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	REVERSING VALVE
TP	COMP. DISCHARGE TEMP. SENSOR
T3	COIL TEMP. SENSOR
T4	OUTDOOR AMBIENT TEMPERATURE SENSOR
COMP TOP	COMP. TOP OLP TEMP. SENSOR
T2B	INDOOR COIL OUTLET TEMP.SENSOR
TF	REFRIGERANT TEMP. SENSOR
T3B	CONDENSER TEMP. SENSOR
TBH-OUT	ECONOMIZER BRANCH OUTLET TEMP.SENSOR
TBH-IN	ECONOMIZER BRANCH INLET TEMP.SENSOR
XT1~7	TERMINAL BLOCK
EBV	ELECTRONIC BALL VALVE

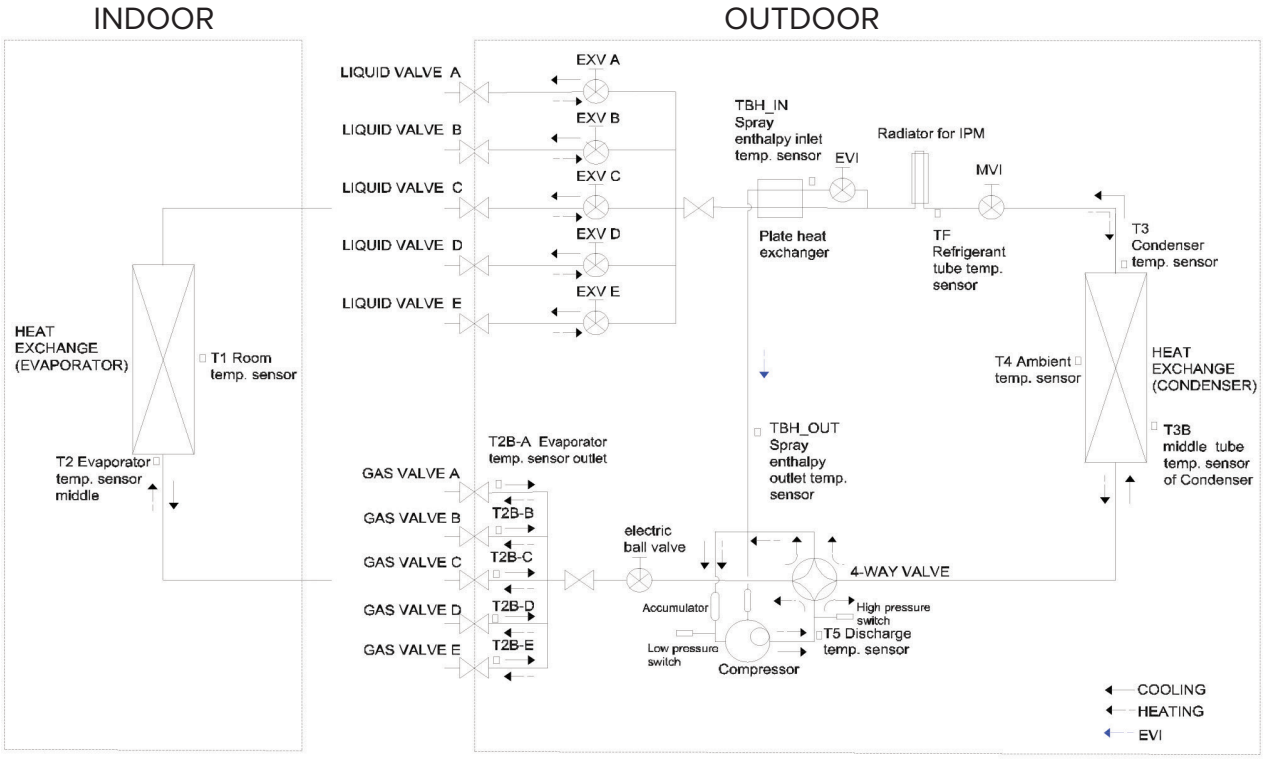
9. Refrigeration Cycle Diagrams



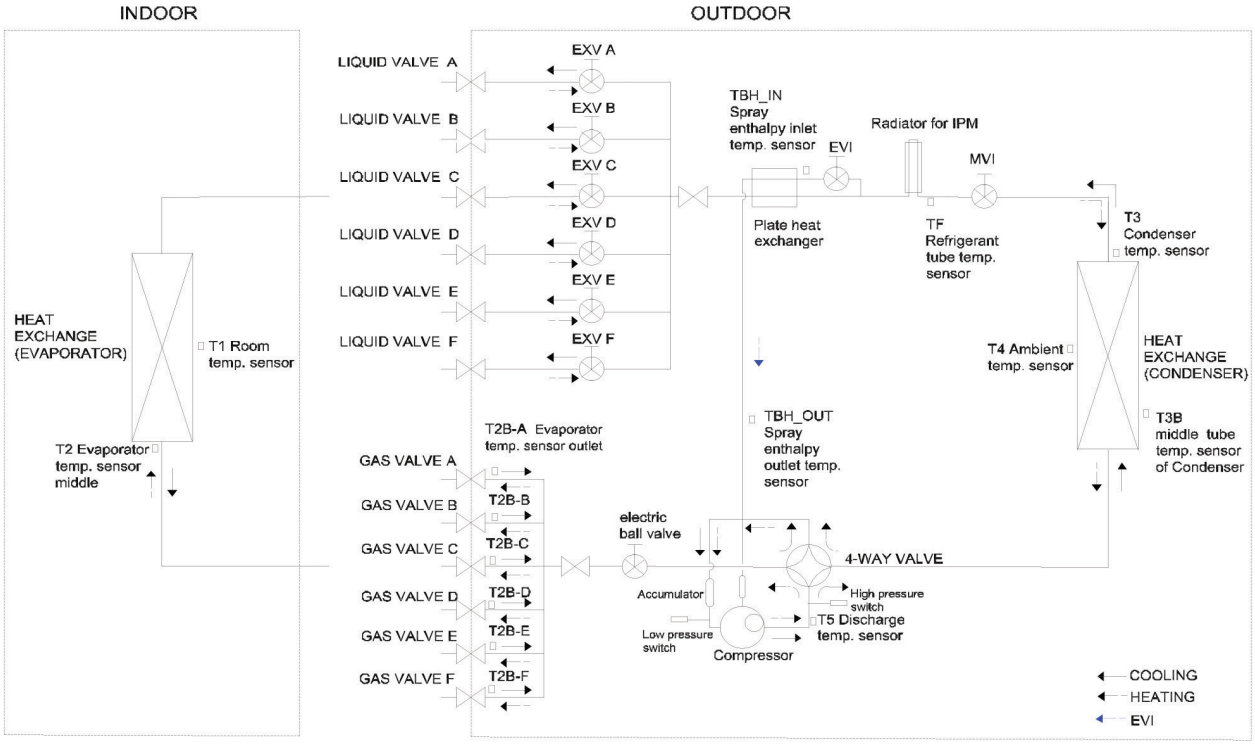
Model	Pipe Size (Diameter:ø)		Piping length (m)			Elevation		Additional Refrigerant
			Rated	Max				
	Gas	Liquid		Single	Total	IDU and ODU	Between IDUs	
NDHAMBB-18-O	3x9.52	3x6.35	22.5	30	60	15	10	15g/m



Model	Pipe Size (Diameter:ø)		Piping length (m)			Elevation		Additional Refrigerant
			Rated	Max				
	Gas	Liquid		Single	Total	IDU and ODU	Between IDUs	
NDHAMBB-27-O	3x9.52 + 1x12.7	4x6.35	30	35	80	15	10	15g/m



Model	Pipe Size (Diameter:ø)		Piping length (m)			Elevation		Additional Refrigerant
			Rated	Max				
	Gas	Liquid		Single	Total	IDU and ODU	Between IDUs	
NDHAMBB-36-O	3x9.52 + 2x12.7	5x6.35	37.5	35	80	15	10	15g/m

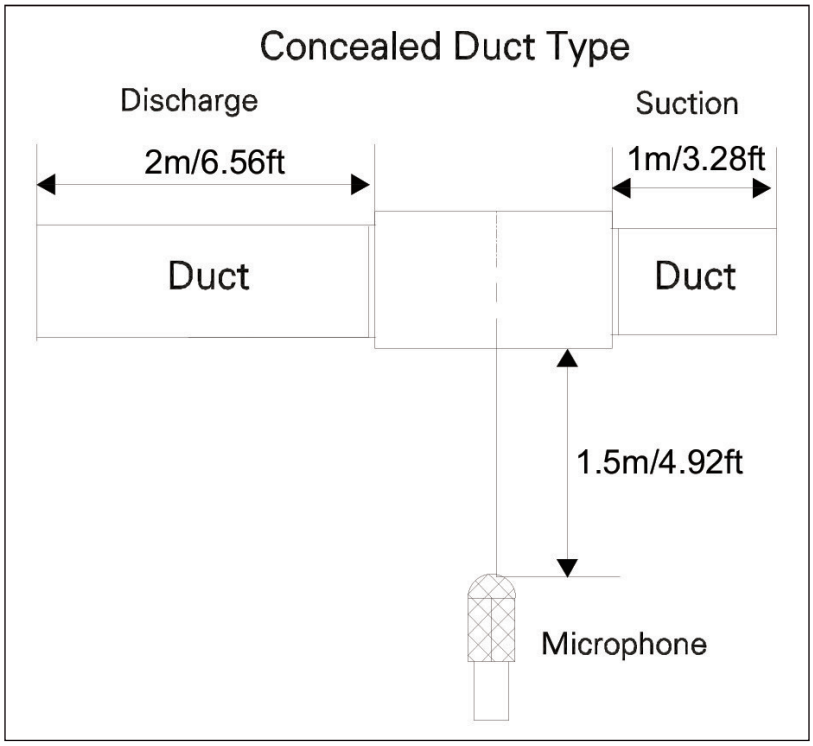


Model	Pipe Size (Diameter:ø)		Piping length (m)			Elevation		Additional Refrigerant
			Rated	Max				
	Gas	Liquid		Single	Total	IDU and ODU	Between IDUs	
NDHAMBB-O-	4x9.52 + 2x12.7	6x6.35	37.5	35	80	15	10	15g/m

10. Noise Criterion Curves

10.1. Indoor Unit

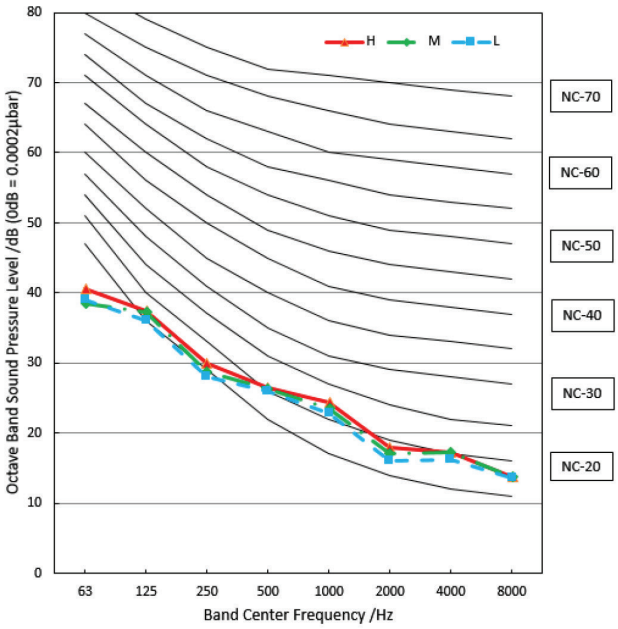
10.1.1. High Static Slim Duct Type



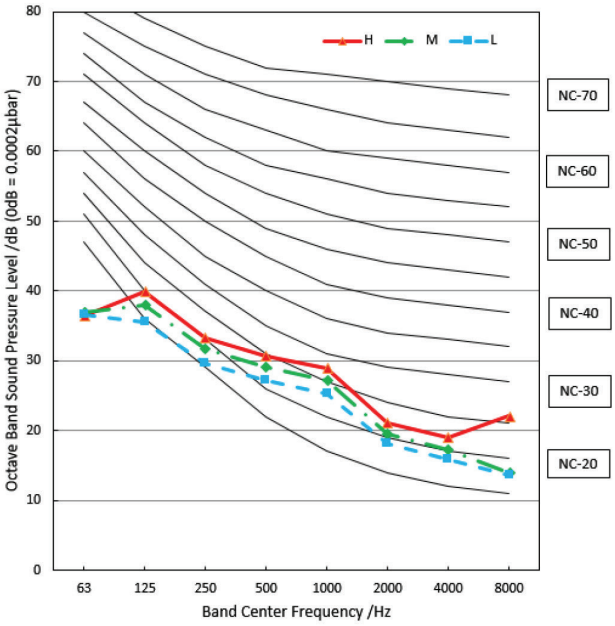
Notes:

- Sound measured at 1.5m/4.92ft away from the center of the unit.
- Data is valid at nominal operation condition.
- Reference acoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction -(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

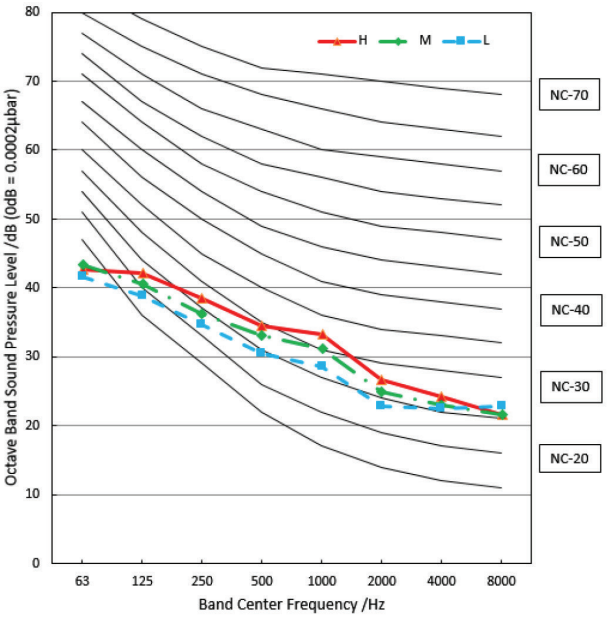
NDHASHDBB-09



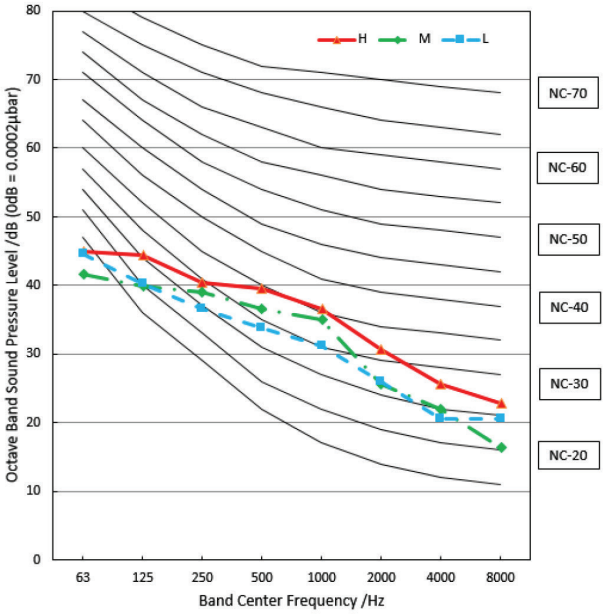
NDHASHDBB-12



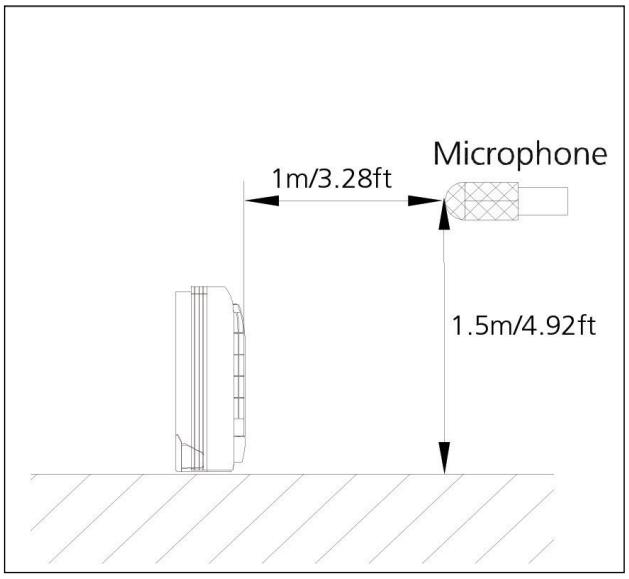
NDHASHDBB-18



NDHASDHBB-24



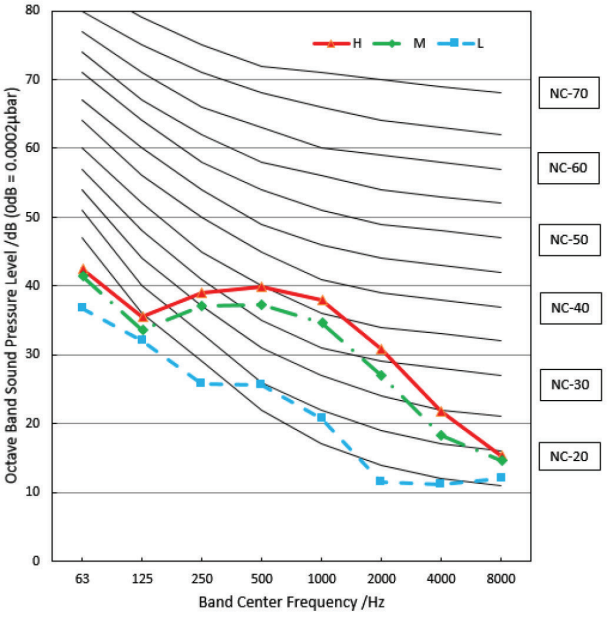
10.1.2. Floor Console Type



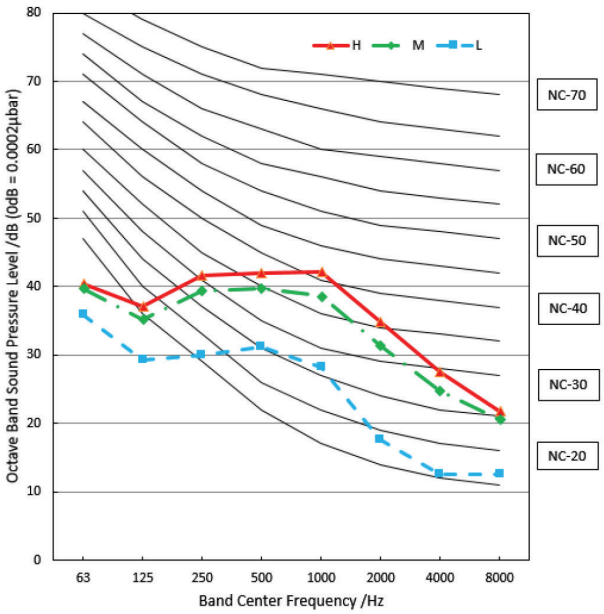
Notes:

- Sound measured at 1m/3.28 away from the unit and 1.5m/4.92ft away from the ground.
- Data is valid at nominal operation condition.
- Reference acoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

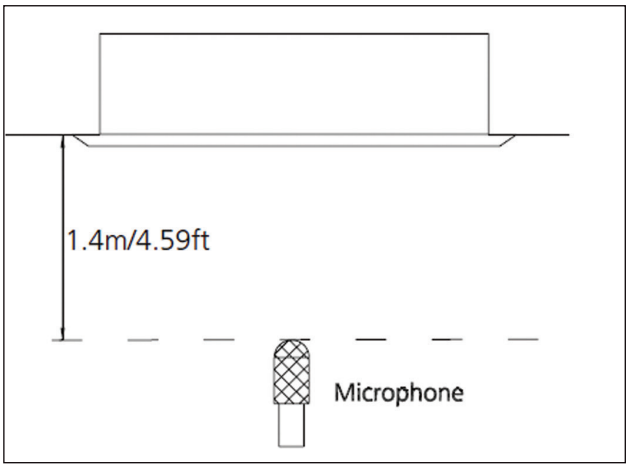
NDHASCBB-12



NDHASCBB-18



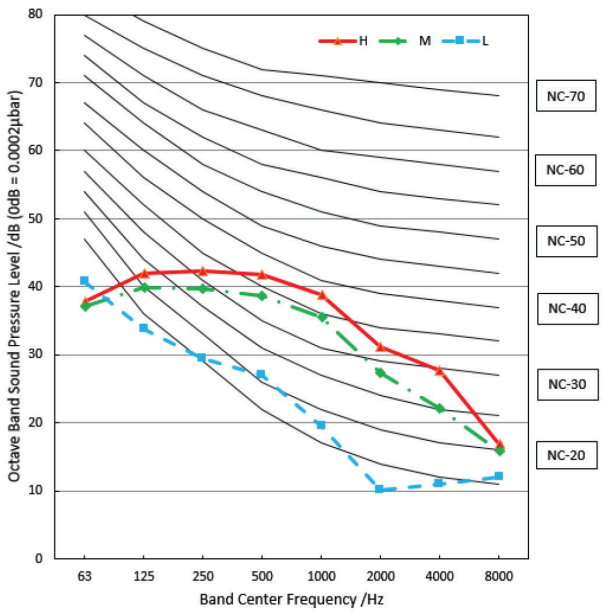
10.1.3. Compact Cassette Type



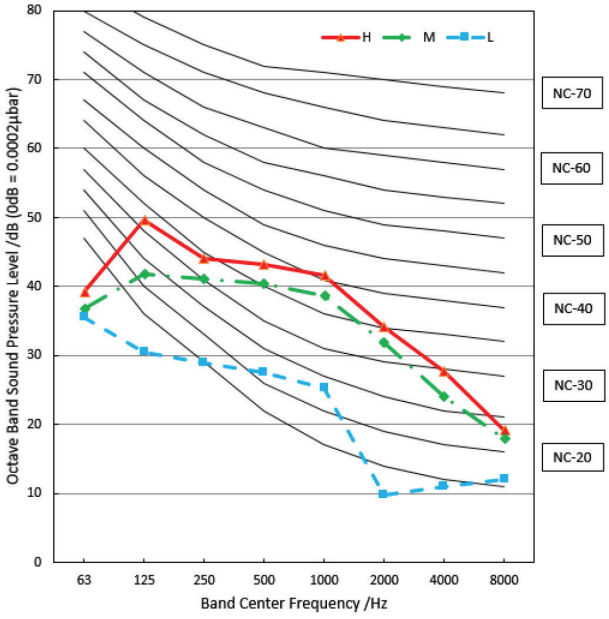
Notes:

- Sound measured at 1.4m/4.59ft away from the noisiest location of the unit.
- Data is valid at nominal operation condition
- Reference acoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

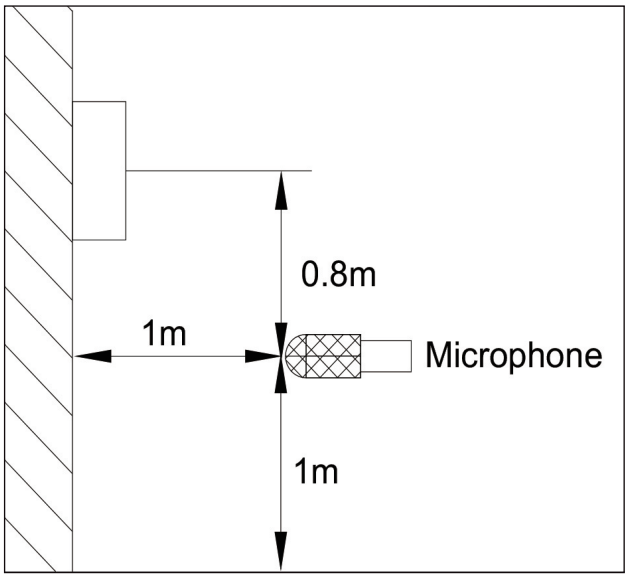
NDHAS4CBB-12



NDHAS4CBB-18



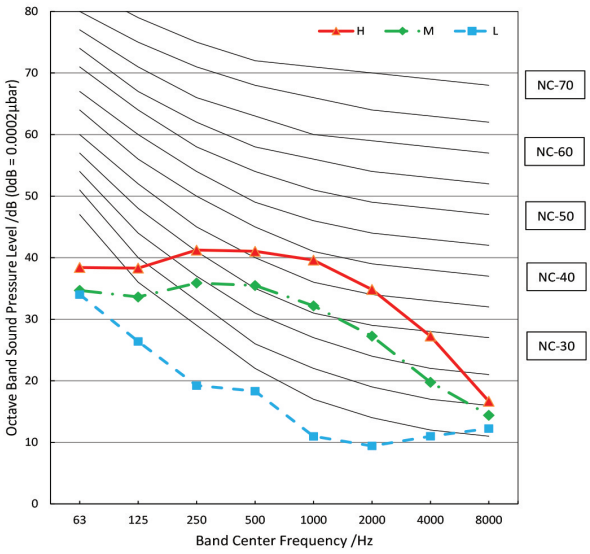
10.1.4. High Wall Types



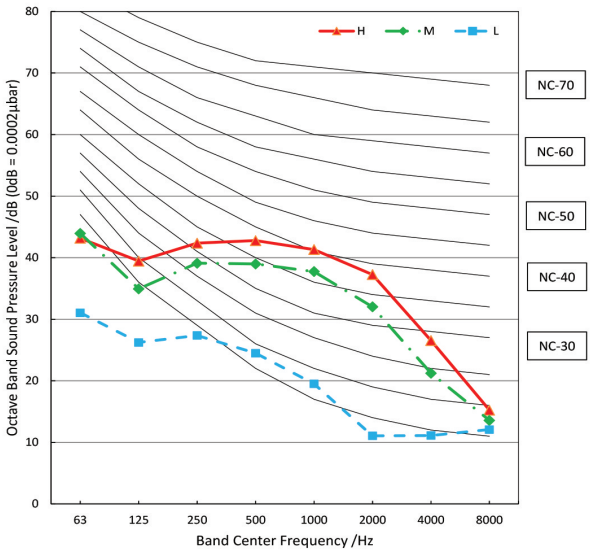
Notes:

- Sound measured at 1.0m away from the center of the unit.
- Data is valid at nominal operation condition
- Reference acoustic pressure OdB = 20μPa
- Sound level will vary depending on a range of factors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

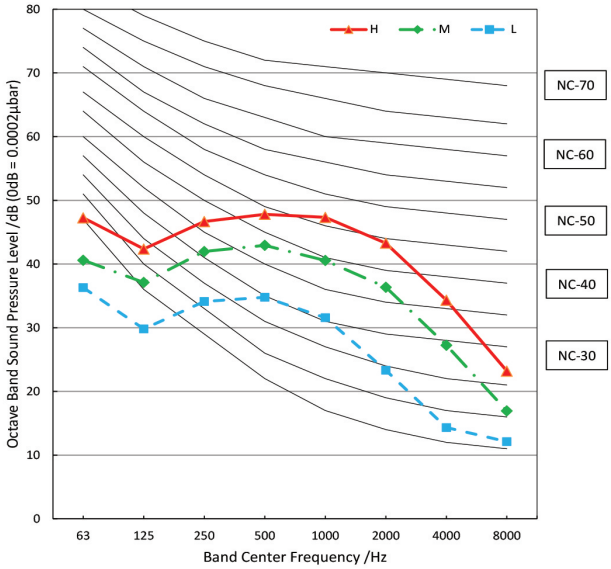
NDHAS22BB-12-I



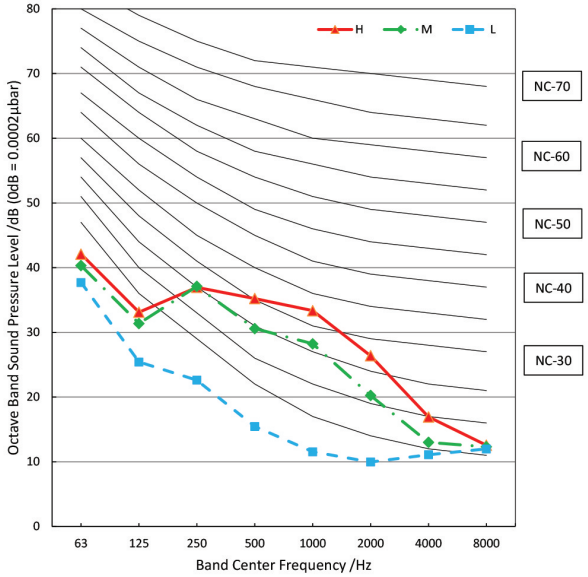
NDHAS22BB-18-I



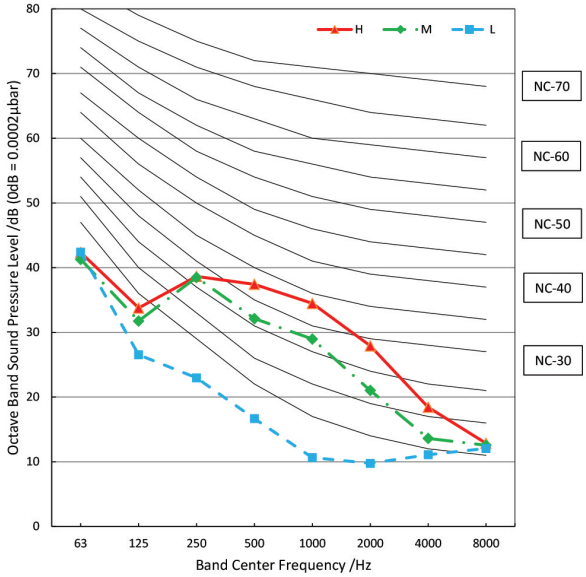
NDHAS22BB-24-I



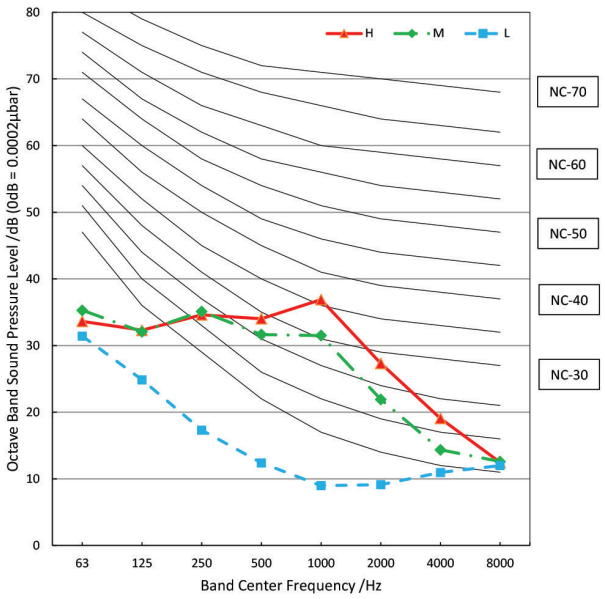
NDHASBB--06-I



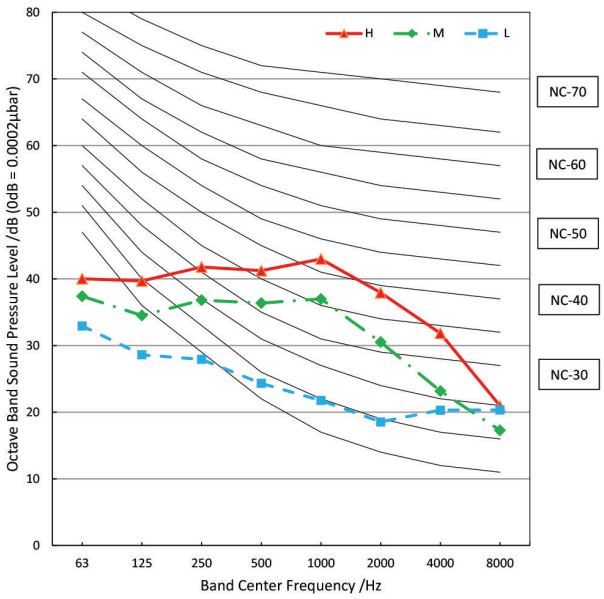
NDHAS26BB-09-I



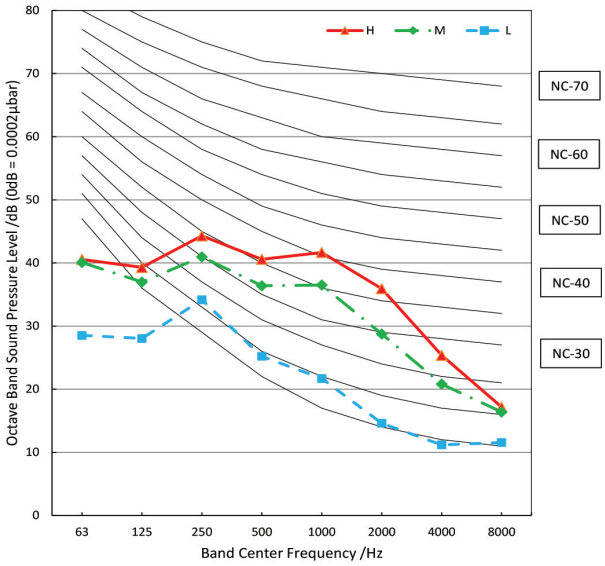
NDHAS26BB-12-I



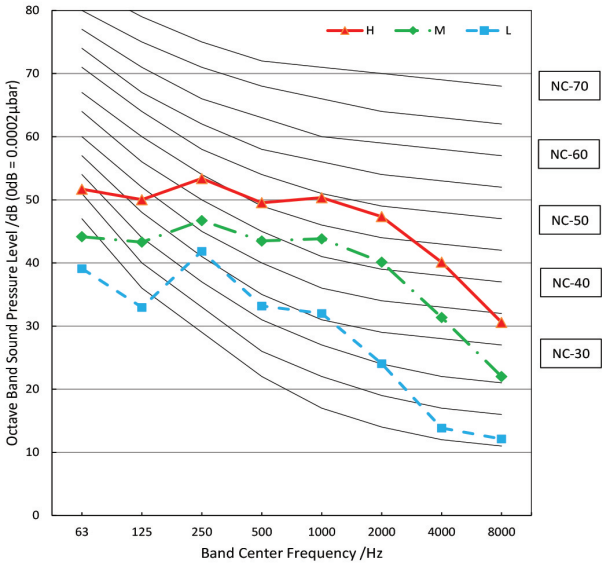
NDHAS26BB18-I



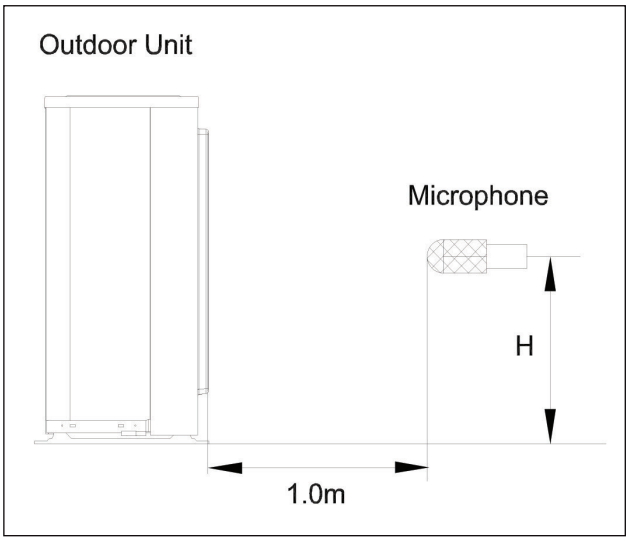
NDHAS26BB-24-I



NDHAS26BB-33-I



10.2. Outdoor Unit

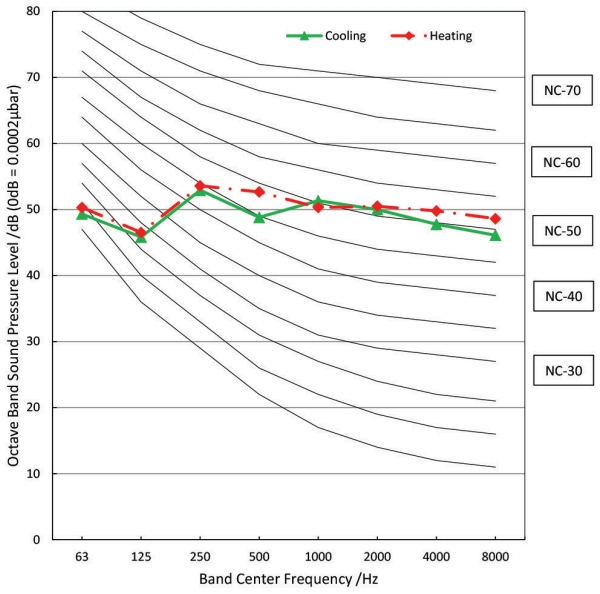


H= 0.5 × height of outdoor unit

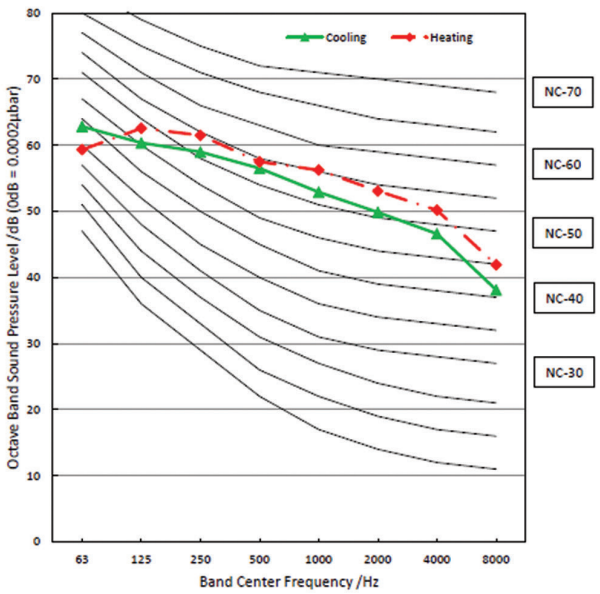
Notes:

- Sound measured at 1.0m away from the center of the unit.
- Data is valid at free field condition
- Data is valid at nominal operation condition
- Reference acoustic pressure OdB=20μPa
- Sound level will vary depending on arrange off actors such as the construction (acoustic absorption coefficient) of particular room in which the equipment is installed.
- The operating conditions are assumed to be standard.

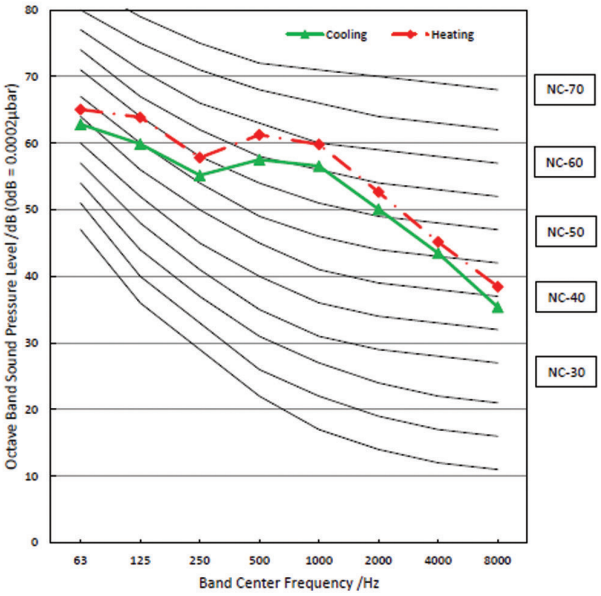
NDHAMBB-18-O



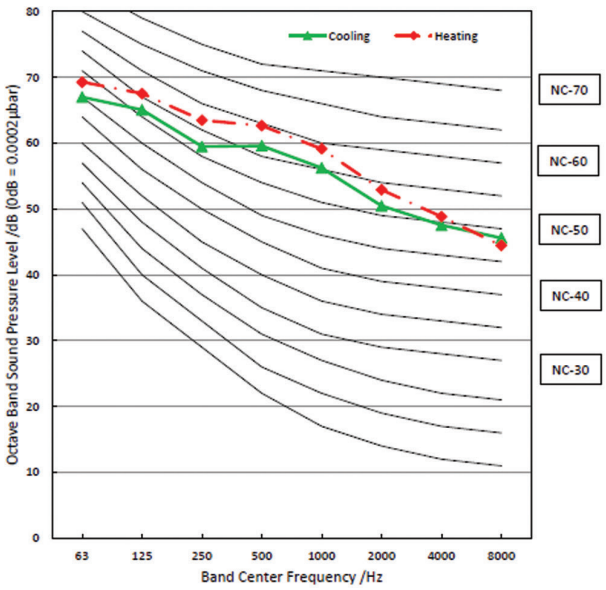
NDHAMBB-27-O



NDHAMBB-36-O



NDHAMBB-48-O



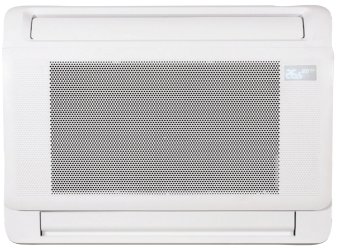
Notes

MANUEL TECHNIQUE

SYSTÈME MULTIZONE MINI-SPLIT APPAREIL MURAL

Modèles :

NDHASHDB | NDHASCB | NDHAS4CB | NDHAS22B | NDHAS26B
NDHAMBB-18-O | NDHAMBB-27-O |NDHAMBB-36-O | NDHAMBB-48-O






Wolf Steel Ltd., 24 Napoleon Rd., Barrie, ON, L4M 0G8 Canada 103 Miller Drive, Crittenden, Kentucky, USA, 41030
Téléphone 1 (866) 820-8686 · www.napoleon.com · hvac@napoleon.com

R454B

Table des matières

1. Référence du modèle 57

2. Apparence extérieure 58

2.1. Unité intérieure 58

2.2. Unité extérieure 58

3. Fonctions 59

3.1. Unité gainable à haute pression statique 59

3.2. Type console 60

3.3. Type cassette à 1 voie 61

3.4. Type cassette compacte 63

3.5. Haut de gamme mural 64

3.6. Murale ultime 65

4. Noms des pièces des unités intérieures 67

4.1. Unité gainable à haute pression statique 67

4.2. Type console 67

4.3. Type cassette compacte 68

4.4. Type mural NDHAS22B 68

4.5. Type mural NDHAS26B 69

5. Combinaison d’unités intérieures 70

6. Dessins dimensionnels 72

6.1. Unité intérieure 72

6.2. Unité extérieure 77

7. Centre de gravité 80

7.1. NDHAMBB-18-O, NDHAMBB-27-O 80

7.2. NDHAMBB-36-O 80

7.3. NDHAMBB-48-O 81

8. Schémas de câblage électrique 82

8.1. Unité intérieure 82

8.2. Unité extérieure 87

9. Schémas du cycle de réfrigération 91

10. Courbes de critère de bruit 95

10.1. Unité intérieure 95

10.2. Unité extérieure 102

1. Référence du modèle

Veuillez consulter le tableau suivant pour déterminer le numéro de modèle spécifique de l'unité intérieure et extérieure de votre équipement acheté.

Unité intérieure		Unité extérieure	Alimentation électrique
Unité gainable à basse pression statique	NDHAS22BB-09-I	NDHAMBB-18-O NDHAMBB-27-O NDHAMBB-36-O NDHAMBB-48-O	1Phase, 208/230V~, 60Hz
	NDHAS22BB-12-I		
	NDHAS22BB-18-I		
	NDHAS22BB-24-I		
Série murale ultime	NDHAS26BB-06-I		
	NDHAS26BB-09-I		
	NDHAS26BB-12-I		
	NDHAS26BB-18-I		
	NDHAS26BB-24-I		
	NDHAS26BB-33-I		
Consoles de plancher	NDHASCBB-09		
	NDHASCBB-12		
	NDHASCBB-18		
Cassettes à 4 voies	NDHAS4CBB-12		
	NDHAS4CBB-18		
Unité gainable à haute pression statique Slim Duct	NDHASHDBB-09		
	NDHASHDBB-12		
	NDHASHDBB-18		
	NDHASHDBB-24		

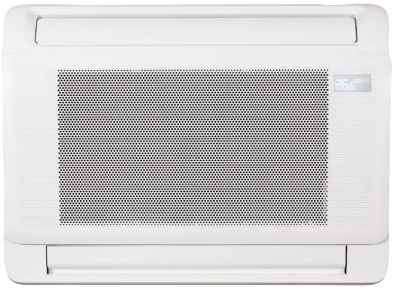
2. Apparence extérieure

2.1. Unité intérieure

- **NDHASHDB**



- **NDHASCB**



- **NDHAS4CB**



- **Type appareil mural - NDHAS22B**



- **Type appareil mural NDHAS26B**



2.2. Unité extérieure

- **Unité extérieure à un seul ventilateur**



- **Unité extérieure à double ventilateur**



3. Fonctions

3.1. Unité gainable à haute pression statique

3.1.1. Volume d'air constant en temps réel

Grâce à la fonction d'ajustement automatique du débit d'air, l'Unité gainable A7 peut adapter automatiquement le volume d'air à différents designs de gaines, ce qui facilite l'installation, offre un confort accru et permet des économies.

3.1.2. Deux modes d'installation

Deux types de méthodes d'installation peuvent être sélectionnés :

1. Plafond encastré **(Fig. 1)** et
2. Plancher encastré (optionnel) **(Fig. 2).**

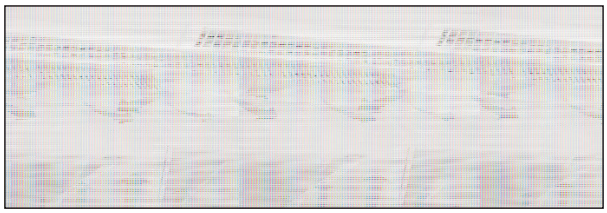


Fig. 1

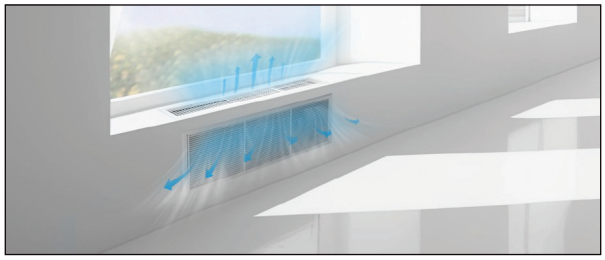


Fig. 2

La machine à gaine MSP n'a pas besoin de remplacer le bac à eau et la pompe à eau est compatible avec les deux méthodes d'installation **(Fig. 3&4).**

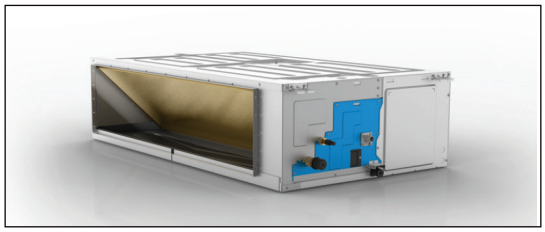


Fig. 3

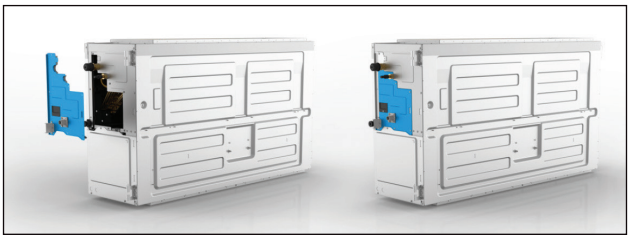


Fig. 4

3.1.3. Optimisation de la conception des gaines

Grâce à la nouvelle conception de la gaine, le niveau sonore intérieur a été considérablement réduit. Les utilisateurs finaux ne deviendront pas facilement irritables même en restant longtemps à l'intérieur **(Fig. 5).**

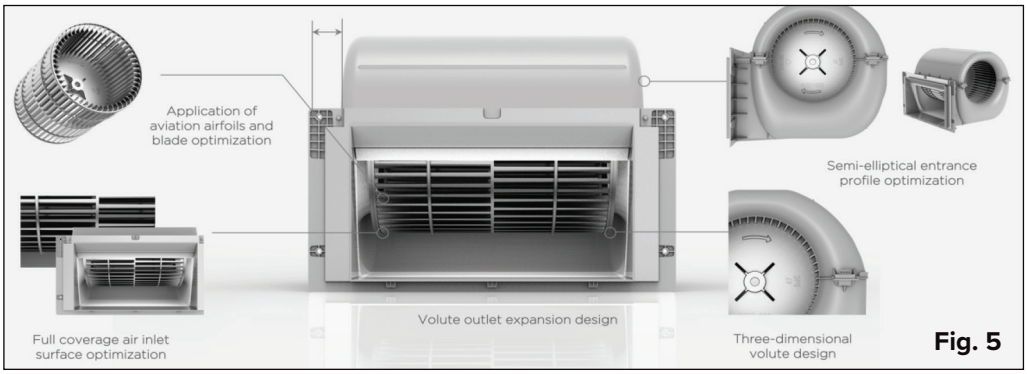


Fig. 5

3.1.4. Amélioration du moteur du ventilateur

- La conception du support moteur intégré, qui regroupe trois pièces en une seule, améliore la stabilité à l'installation et facilite le démontage et l'assemblage.
- La conception à ressort hélicoïdal améliore la stabilité à l'installation et facilite le démontage et l'assemblage.

3.1.5. Amélioration du contrôle électrique

La surface du boîtier de commande électrique a été augmentée de 10 %, et la carte de commande a été miniaturisée, réduisant la surface de 40 %. Espace d'entretien plus grand et remplacement du boîtier de commande électronique plus pratique.

3.1.6. Amélioration de la pompe de drainage

La zone de service de l'Unité gainable A7 est 20 % supérieure à celle de l'A6. Il n'est pas nécessaire de traverser le trou lors du remplacement de la pompe de drainage et du capteur de température **(Fig. 6).**

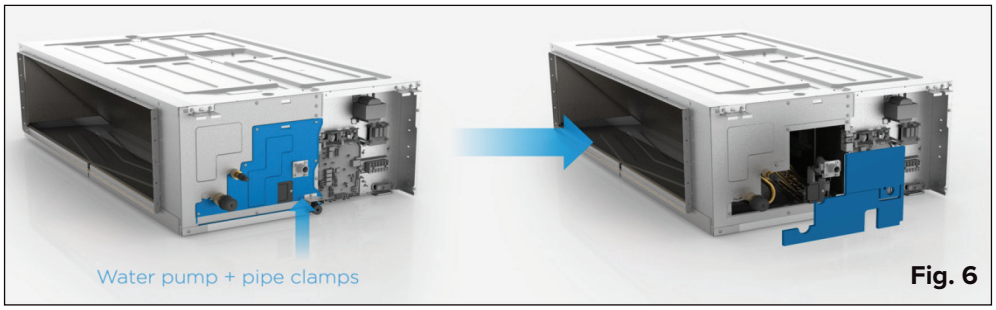


Fig. 6

3.2. Type console

3.2.1. Un design élégant et compact

- L'apparence de la console de plancher nouvellement améliorée présente des lignes fluides et est suffisamment esthétique.
- Son design discret s'intègre facilement dans la plupart des intérieurs avec différents styles de décoration.
- La largeur de la machine a été réduite de 10 mm, occupant ainsi moins d'espace.

3.2.2. Un choix parfait pour les nouveaux bâtiments et les projets de rénovation

- La console de plancher peut être installée debout sur le sol ou fixée au mur **(Fig. 7).**

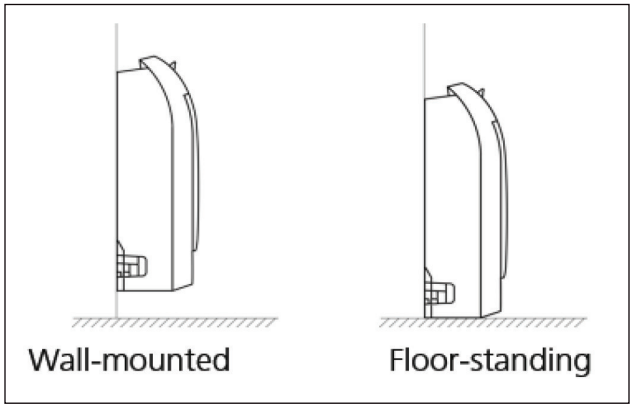
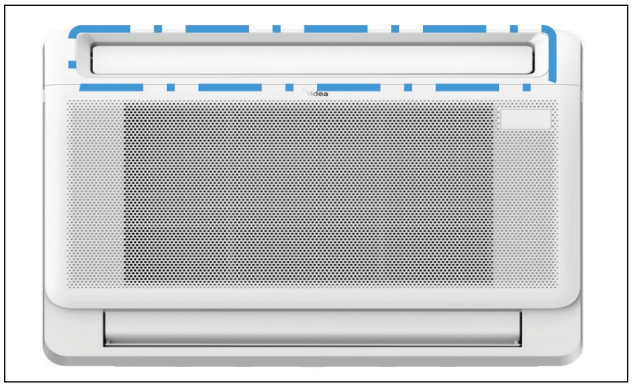


Fig. 7

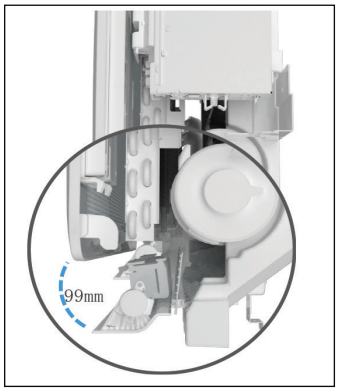
- C'est une excellente option pour remplacer un radiateur afin d'économiser de l'espace tout en offrant plus de fonctionnalités.

3.2.3. Deux sorties d'air de plus grande dimension

Améliore efficacement le volume d'air, offrant un refroidissement et un chauffage constants et rapides toute l'année.



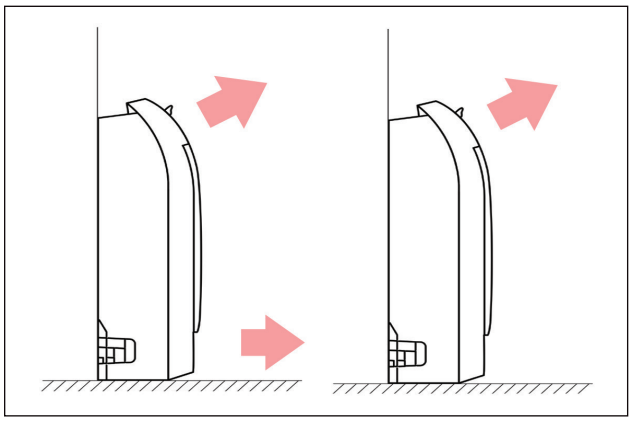
Sortie d'air supérieure 65,3 % PLUS GRANDE*
Les dimensions passent de 516 mm*43 mm à 655 mm*56 mm

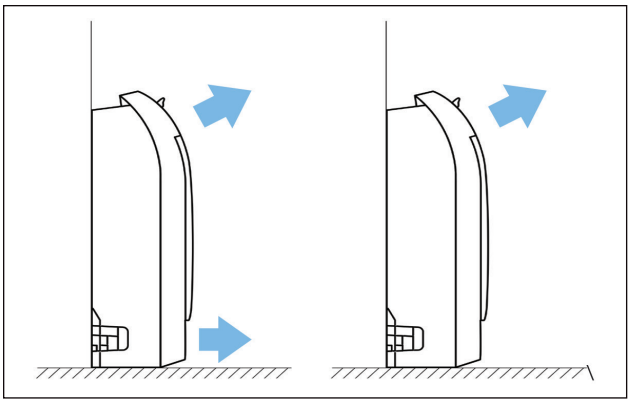


Sortie d'air inférieure 94,1 % PLUS LARGE*

Sortie d'air inférieure de 99 mm assure une distribution uniforme de l'air chaud

- Large flux d'air et confort constant : les doubles sorties d'air répondent aux besoins de refroidissement et de chauffage selon les saisons et permettent un confort rapide dans la pièce.



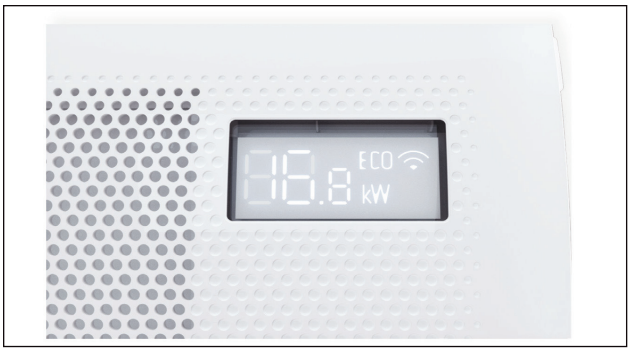


***Comparé à la dernière génération de console de plancher**

3.2.4. Air de qualité

Nous prenons soin de votre air intérieur de qualité sous plusieurs angles

- Obtenez l'HUMIDITÉ idéale pour vous
  - » La nouvelle console de plancher déshumidifie efficacement l'air pour garder l'air ambiant sec et à un niveau d'humidité confortable.
  - » L'écran d'affichage sur le panneau avant est fiable et facile à utiliser.



3.3. Type cassette à 1 voie

3.3.1. Panneau élévateur

- Désormais, plus besoin de monter et descendre, car le panneau peut lui-même monter et descendre.
- En activant la fonction Panneau élévateur sur la télécommande (ou le contrôleur intelligent), le panneau

descend directement vers vous pour retirer facilement le filtre à air. Le nettoyage devient très facile.

- La longueur ajustable des cordes peut être réglée à 1,5 m ou 2 m selon la hauteur de l'étage.
- Vous pouvez simplement utiliser votre main pour suspendre le panneau à la hauteur désirée lors de sa descente, afin de ne pas avoir à vous pencher pour le filtre à air.



3.3.2. Installation à 2 voies

- INSTALLATION PushIn
  - » Lorsqu'il s'agit de choisir l'emplacement pour accrocher les crochets et l'unité, il y a des exigences strictes concernant l'état du plafond, et la position souhaitée pour installer l'unité n'est pas toujours la position idéale.
  - » Un boîtier PushIn unique et exclusif est conçu pour faciliter les options d'installation.
  - » Les installateurs peuvent fixer le boîtier de l'unité sur les poutres avec des vis, puis brancher la cassette unidirectionnelle EVOX et connecter les conduits.
  - » Cette méthode permet une installation sans dépendre des conditions du plafond et libère les installateurs des mesures et ajustements manuels de la distance entre les crochets, garantissant que l'unité est placée précisément à l'endroit désiré.



- INSTALLATION HangUp
  - » Bien sûr, les installateurs peuvent opter pour une méthode plus courante en fixant l'unité avec des crochets.
  - » Nos supports avec un design anti-coupure optimisé sont faciles à saisir et à soulever, évitant que les mains ne soient égratignées par les bords tranchants.

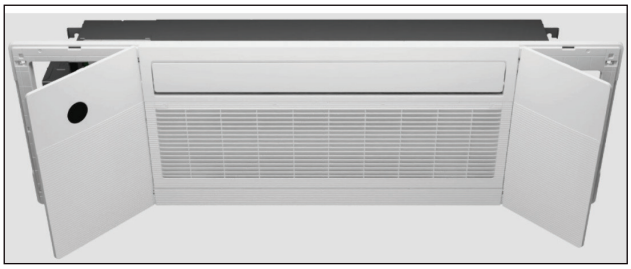


3.3.3. Pompe de drainage encastrée

- La pompe à eau encastrée peut évacuer l'eau de condensation.
- Il n'est pas nécessaire d'ajouter une pompe à eau supplémentaire sur le côté de l'unité.

3.3.4. Composants centraux faciles d'accès

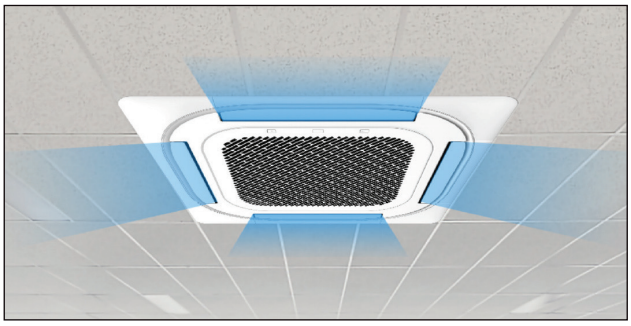
- En adoptant le design du modèle mural, les installateurs n'ont qu'à ouvrir le panneau avant pour accéder à la boîte PCB et à la section de la pompe à eau.



3.4. Type cassette compacte

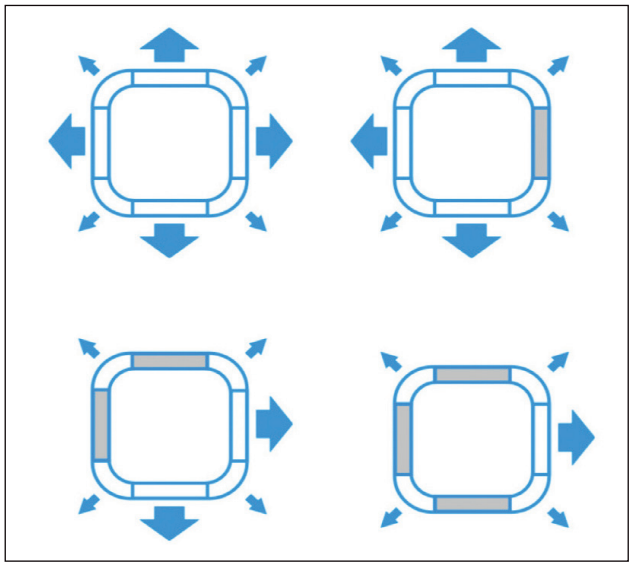
3.4.1. Décharge d'air près de 360° : efficacité et confort optimaux

- Avec une décharge d'air proche de 360°, profitez d'un flux d'air uniforme et puissant, sans être dérangé par des courants d'air froids et désagréables. Profitez d'un air vraiment immersif dans un espace ouvert.



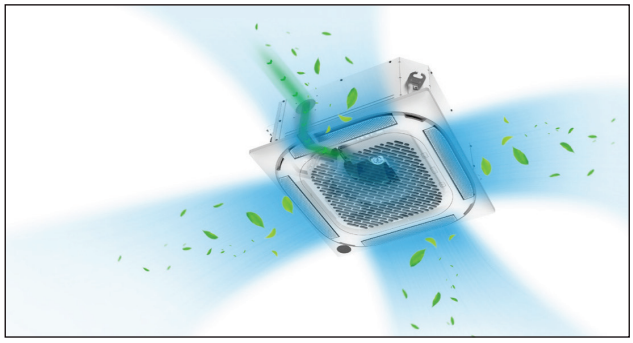
3.4.2. Contrôle individuel des ailettes pour un confort personnalisé

- Contrôle individuel des ailettes, 4 expériences de refroidissement possibles en une seule occasion.



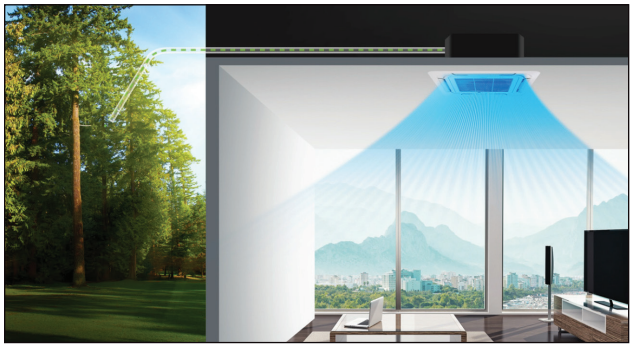
3.4.3. Air frais

- Un port d'air frais réservé permet d'apporter de l'air frais de l'extérieur, gardant l'air intérieur frais et sain.
- Le PCB de l'unité intérieure est également doté en standard de nouveaux ports de connexion pour ventilateur (CN8) afin de fournir une alimentation de 220 V à un moteur de ventilateur externe de moins de 200 W.



3.4.4. Air frais

- La fonction d’admission d’air frais vous procure une sensation d’air frais et confortable.

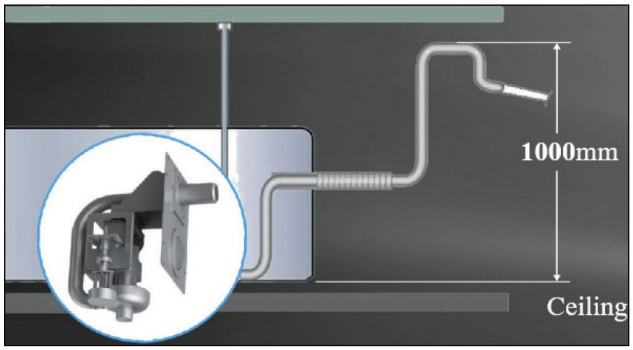


3.4.5. Contrôleur filaire

- Comparé à une télécommande infrarouge, le contrôleur filaire peut être fixé au mur et évite de l’égarer. Il est principalement utilisé pour les zones commerciales et rend le contrôle du climatiseur plus pratique.

3.4.6. Pompe de drainage encastrée

- La pompe de drainage peut soulever l’eau condensée jusqu’à 1000 mm. Ce qui facilite l’installation des tuyaux de drainage dans la plupart des conditions. Le tuyau de drainage peut être installé à gauche ou à droite.



3.5. Haut de gamme mural

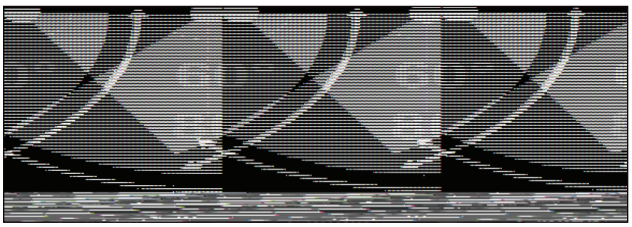
3.5.1. Souffle d’air longue distance

Le design optimisé du conduit d’air, combiné à la vitesse turbo du ventilateur, permet d’obtenir un flux d’air plus long, pour profiter de l’air frais jusqu’à 25 mètres*.

***S’applique uniquement au 90 IDU.3.9.2**

3.5.2. Flux d’air 3D

La sortie d’air directionnelle se déplace automatiquement à l’horizontale et à la verticale, dirigeant un flux d’air frais et agréable dans chaque coin de la pièce.



3.5.3. Évitement du vent

Évitez que le vent souffle directement sur vous en utilisant la télécommande pour ajuster la direction du vent.

3.5.4. i-Clean

- La technologie i-Clean élimine la poussière, la moisissure et la graisse qui peuvent causer des odeurs lorsqu'elles adhèrent à l'échangeur de chaleur, en gelant automatiquement puis en dégelant rapidement le givre.
- La roue interne continue ensuite de fonctionner pour sécher l'évaporateur, empêchant ainsi la croissance de moisissure et gardant l'intérieur propre.

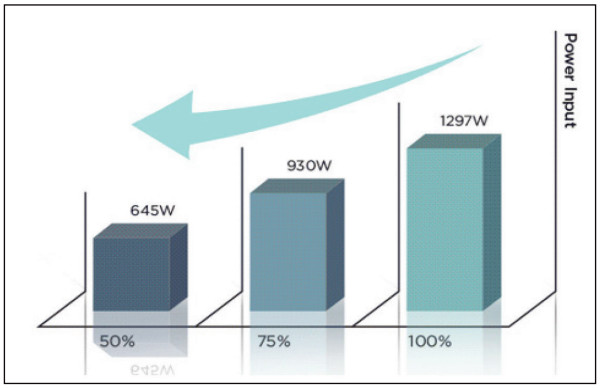
3.5.5. Mode Écono+ d'économie d'énergie

Il suffit d'appuyer sur le bouton Écono+ pour activer le mode. Votre climatiseur peut vous garder au frais pendant une période de 8 heures la nuit avec seulement 1 kWh de consommation d'énergie, économisant 71 %.

3.5.6. Changement de vitesse

Les climatiseurs MIDEA à onduleur offrent trois options de puissance de fonctionnement : 50 %, 75 % et 100 %. Vous pouvez choisir un niveau de puissance inférieur pour économiser de l'énergie.



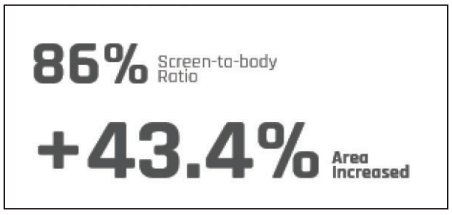


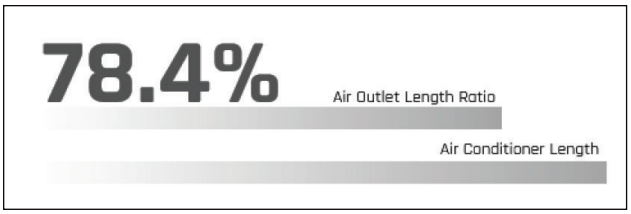
3.6. Murale ultime

3.6.1. Corps compact, meilleure efficacité

795 mm * 295 mm.Grâce à la reconstruction, une machine plus petite mais plus puissante a été conçue. Une norme d'efficacité énergétique supérieure est atteinte.

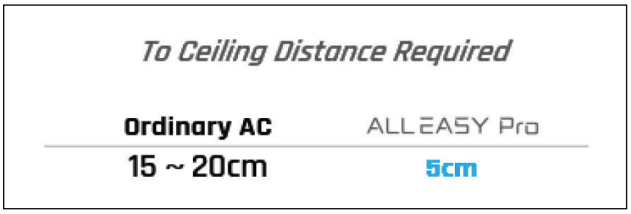
3.6.2. Espace libéré pour plus d'air entrant et sortant





3.6.3. Distance plus courte requise, pour plus de flexibilité à apprécier.

Grâce à l'agrandissement de l'entrée d'air, le climatiseur fonctionne en douceur avec un faible niveau sonore et une capacité de refroidissement suffisante, même lorsqu'il est installé près du plafond.



3.6.4. Démontage facile

Grâce au design Snap-and-Snap des loquets, nous éliminons le tracas des 7 vis ou plus à différents endroits d'une unité intérieure typique à démonter.

Le processus de démontage complet ne vous prend qu'une minute

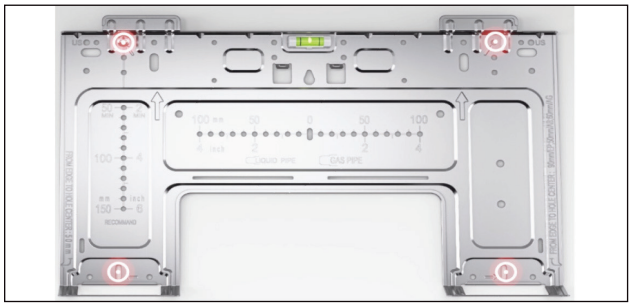
3.6.5. Nettoyage facile - nettoyage rapide par le dessus

Grâce au design Mag Pull – 6 connecteurs magnétiques ronds sur le filtre, le filtre du couvercle supérieur peut être facilement retiré et remis en place en un simple « clic » doux. Le processus complet se fait sans remuer la poussière.

Plus besoin de s'embêter à ouvrir le panneau avant. Nettoyez votre filtre aussi souvent que vous le souhaitez.

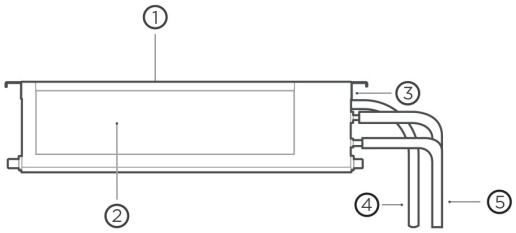
3.6.6. Installation facile - il suffit de le poser, tout simplement

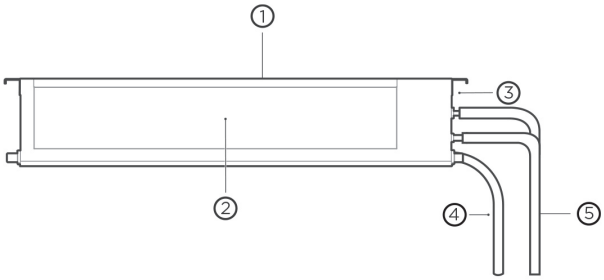
1. Marquez la position avec l'échelle sur la plaque, puis fixez l'installation,
2. Mesurez horizontalement avec la bulle de niveau encastrée et fixez les autres clous
3. Climatiseur sur le mur.

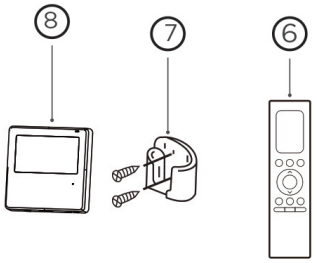


4. Noms des pièces des unités intérieures

4.1. Unité gainable à haute pression statique

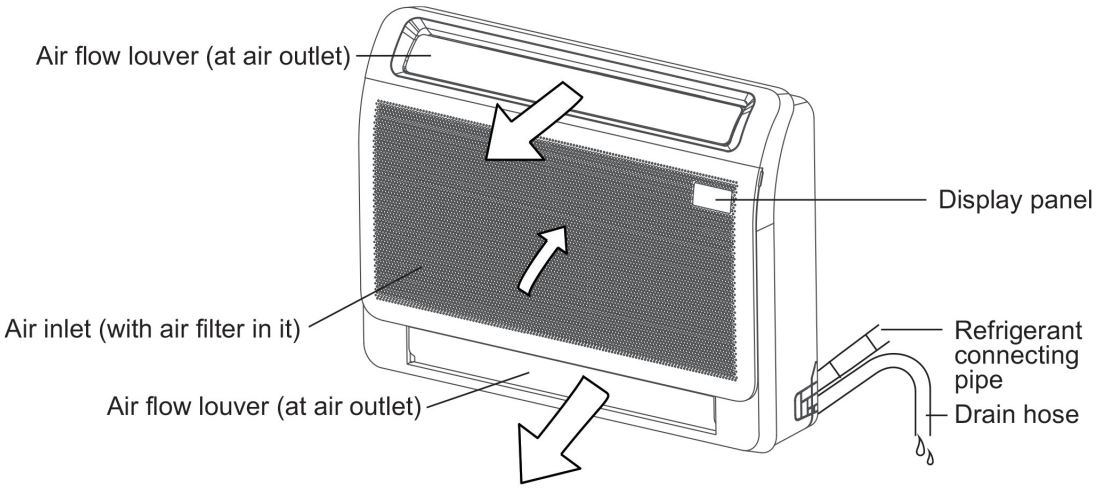




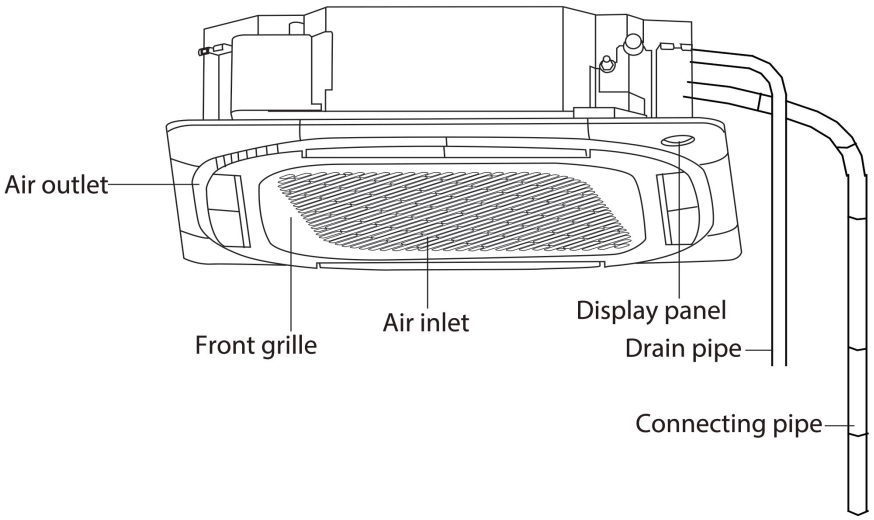


1. Entrée d'air
2. Sortie d'air
3. Boîte de commande électrique
4. Tuyau de drainage
5. Tuyauterie de réfrigérant (à acheter séparément)
6. Télécommande (à acheter séparément)
7. Support de télécommande (à acheter séparément)
8. Télécommande filaire

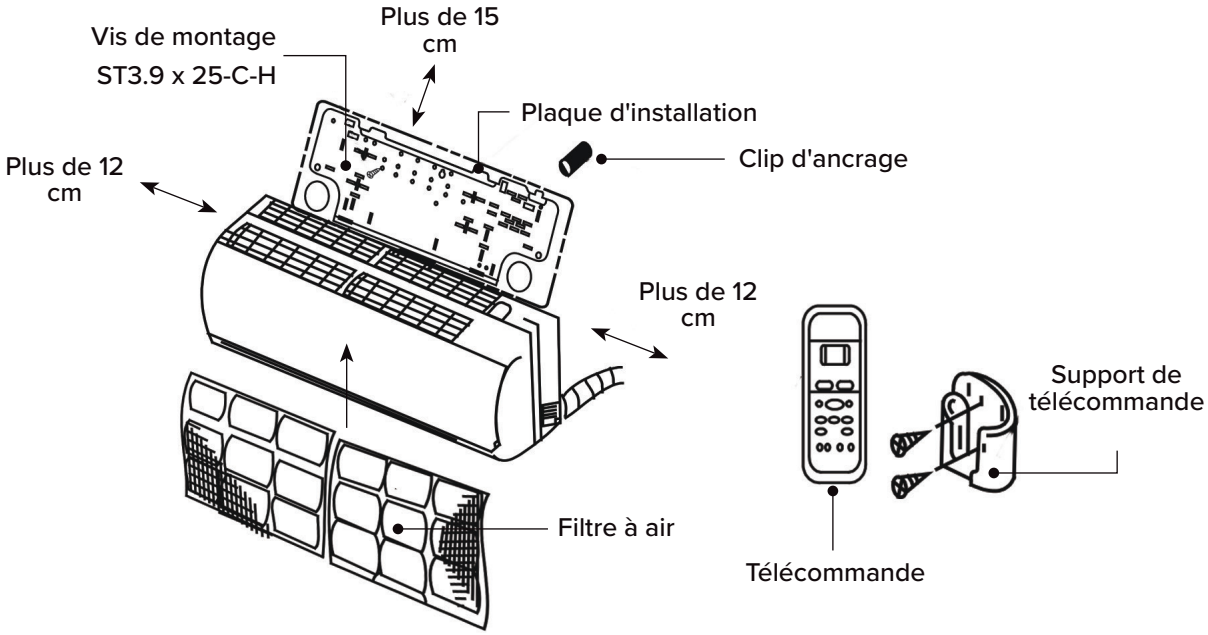
4.2. Type console



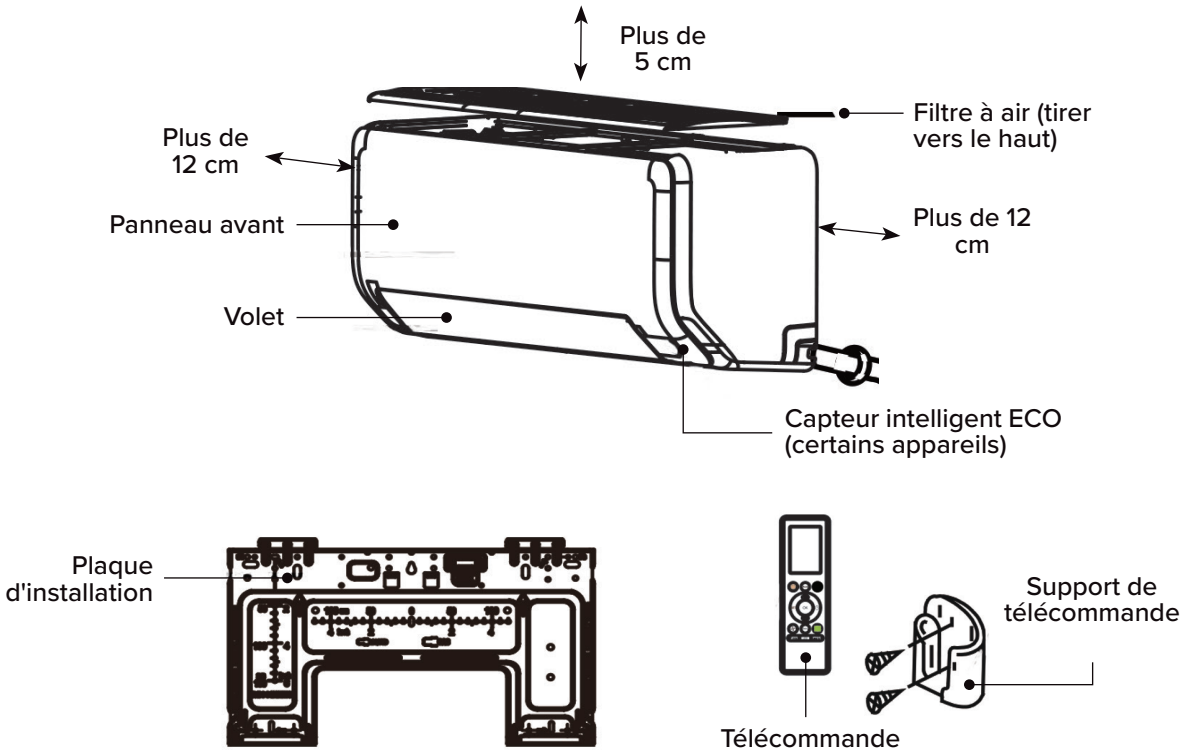
4.3. Type cassette compacte



4.4. Type mural NDHAS22B



4.5. Type mural NDHAS26B



5. Combinaison d’unités intérieures

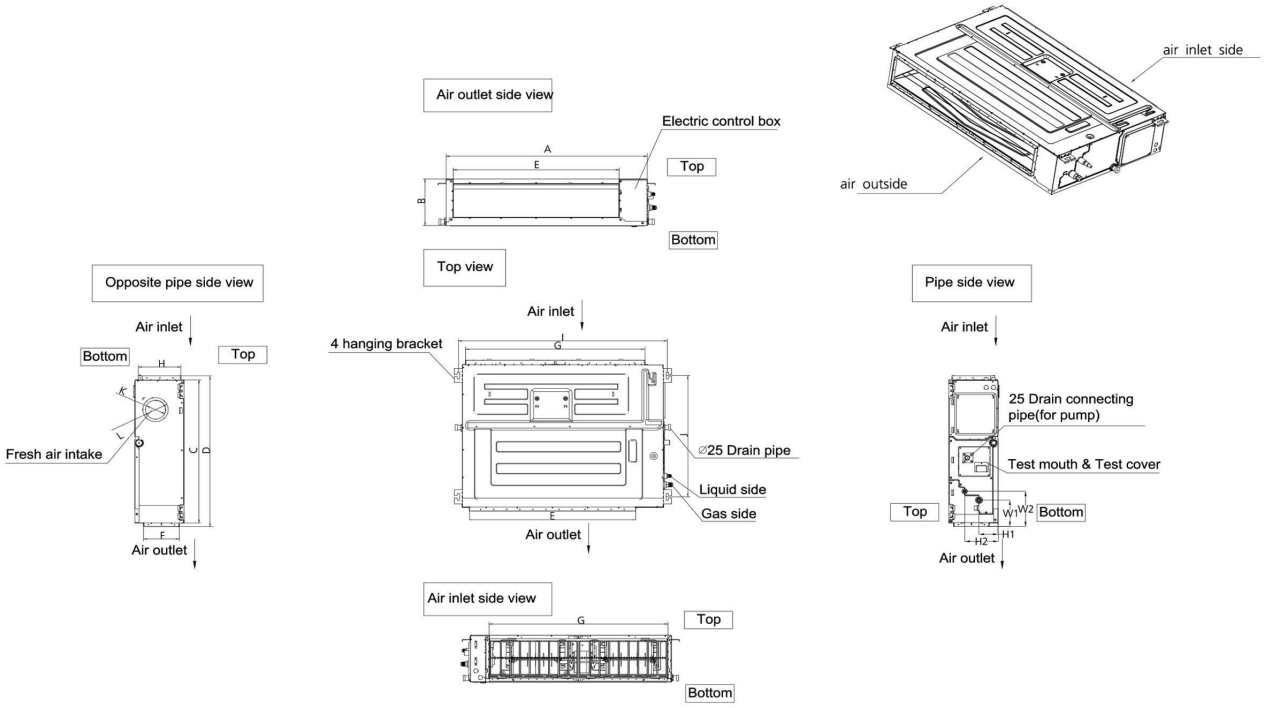
Disponible à l’intérieur	Deux appareils	Trois appareils	NDHAMBB-27-O 4 appareils	NDHAMBB-36-O 5 appareils	NDHAMBB-48-O 6 appareils
Appareil mural, console, cassette, unité gainable : 6K/9K/12K/18K/24K	9+18	6+6+24	6+6+6+6	6+6+6+6+6	6+6+6+6+6+6
	9+24	6+9+12	6+6+6+9	6+6+6+6+9	6+6+6+6+6+9
	12+12	6+9+18	6+6+6+18	6+6+6+6+12	6+6+6+6+6+12
	12+18	6+9+24	6+6+6+24	6+6+6+6+18	6+6+6+6+6+18
	12+24	6+12+18	6+6+9+9	6+6+6+6+24	6+6+6+6+9+9
	18+18	6+12+24	6+6+9+12	6+6+6+9+9	6+6+6+6+9+12
	18+24	6+18+18	6+6+9+18	6+6+6+9+12	6+6+6+6+9+18
	24+24	6+18+24	6+6+9+24	6+6+6+9+18	6+6+6+6+12+12
		9+9+9	6+6+12+12	6+6+6+9+24	6+6+6+6+12+18
		9+9+12	6+6+12+18	6+6+6+12+12	6+6+6+9+9+9
		9+9+18	6+6+12+24	6+6+6+12+18	6+6+6+9+9+12
		9+9+24	6+6+18+18	6+6+6+12+24	6+6+6+9+9+18
		9+12+12	6+6+18+24	6+6+6+18+18	6+6+6+9+12+12
		9+12+18	6+9+9+9	6+6+6+18+24	6+6+6+9+12+18
		9+12+24	6+9+9+12	6+6+9+9+9	6+6+6+12+12+12
		9+18+18	6+9+9+18	6+6+9+9+12	6+6+6+12+12+18
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		18+18+18	6+12+12+12	6+6+9+18+24	6+6+9+12+12+18
			6+12+12+18	6+6+12+12+12	6+9+9+9+9+9
			6+12+12+24	6+6+12+12+18	6+9+9+9+9+12
			6+12+18+18	6+6+12+12+24	6+9+9+9+9+18
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			9+9+12+12	6+9+9+12+12	9+9+9+9+9+18
			9+9+12+18	6+9+9+12+18	9+9+9+9+12+12
			9+9+12+24	6+9+9+12+24	9+9+9+12+12+12
			9+9+18+18	6+9+9+18+18	
			9+9+18+24	6+9+12+12+12	

Disponible à l'intérieur	Deux appareils	Trois appareils	NDHAMBB-27-O 4 appareils	NDHAMBB-36-O 5 appareils	NDHAMBB-48-O 6 appareils
Appareil mural, console, cassette, unité gainable : 6K/9K/12K/18K/24K				6+9+12+12+18	
				6+9+12+12+24	
				6+9+12+18+18	
				6+12+12+12+12	
				6+12+12+12+18	
				9+9+9+9+9	
				9+9+9+9+12	
				9+9+9+9+18	
				9+9+9+9+24	
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				9+9+12+12+18	
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				12+12+12+12+12	

6. Dessins dimensionnels

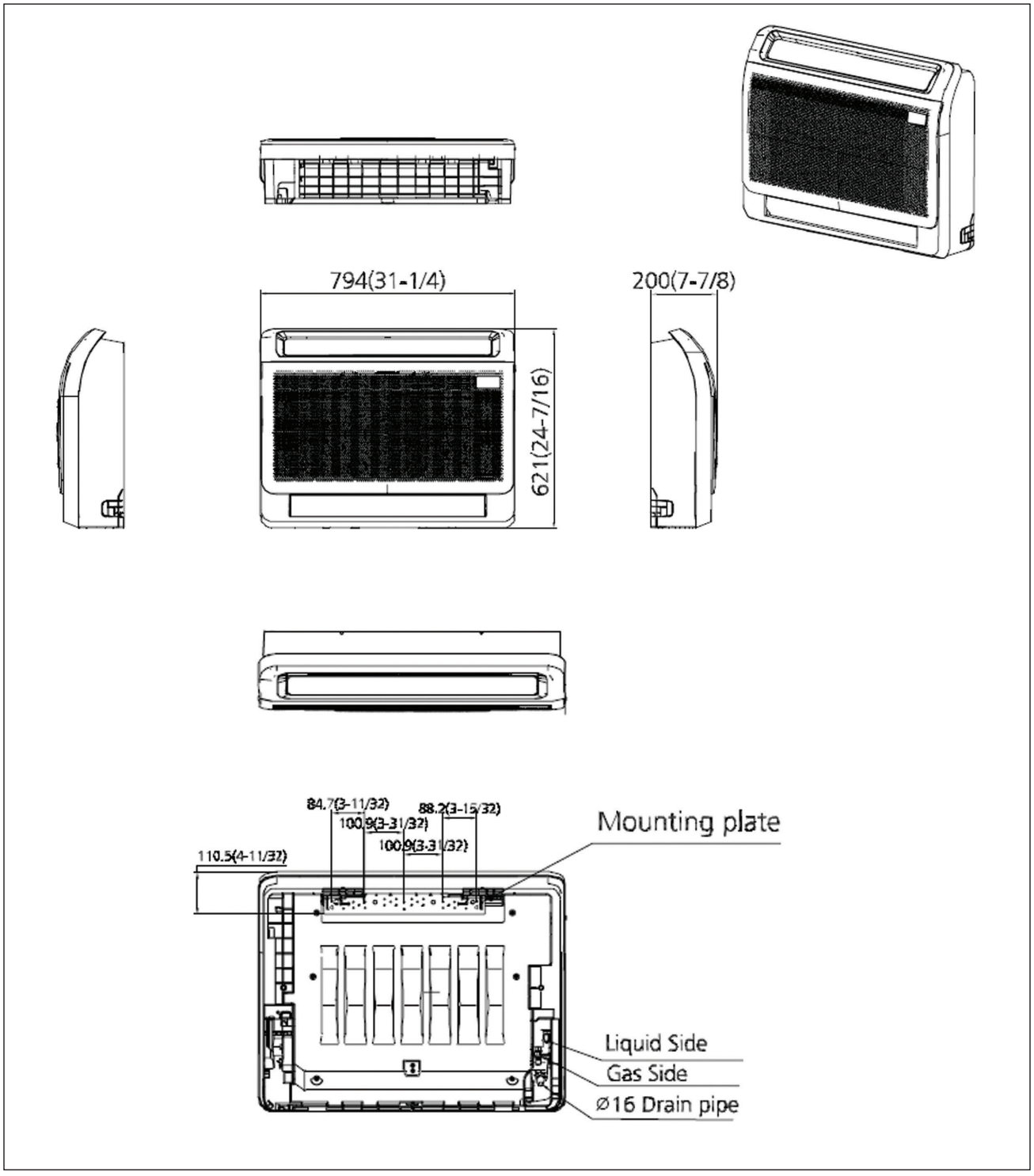
6.1. Unité intérieure

6.1.1. Unité gainable à haute pression statique

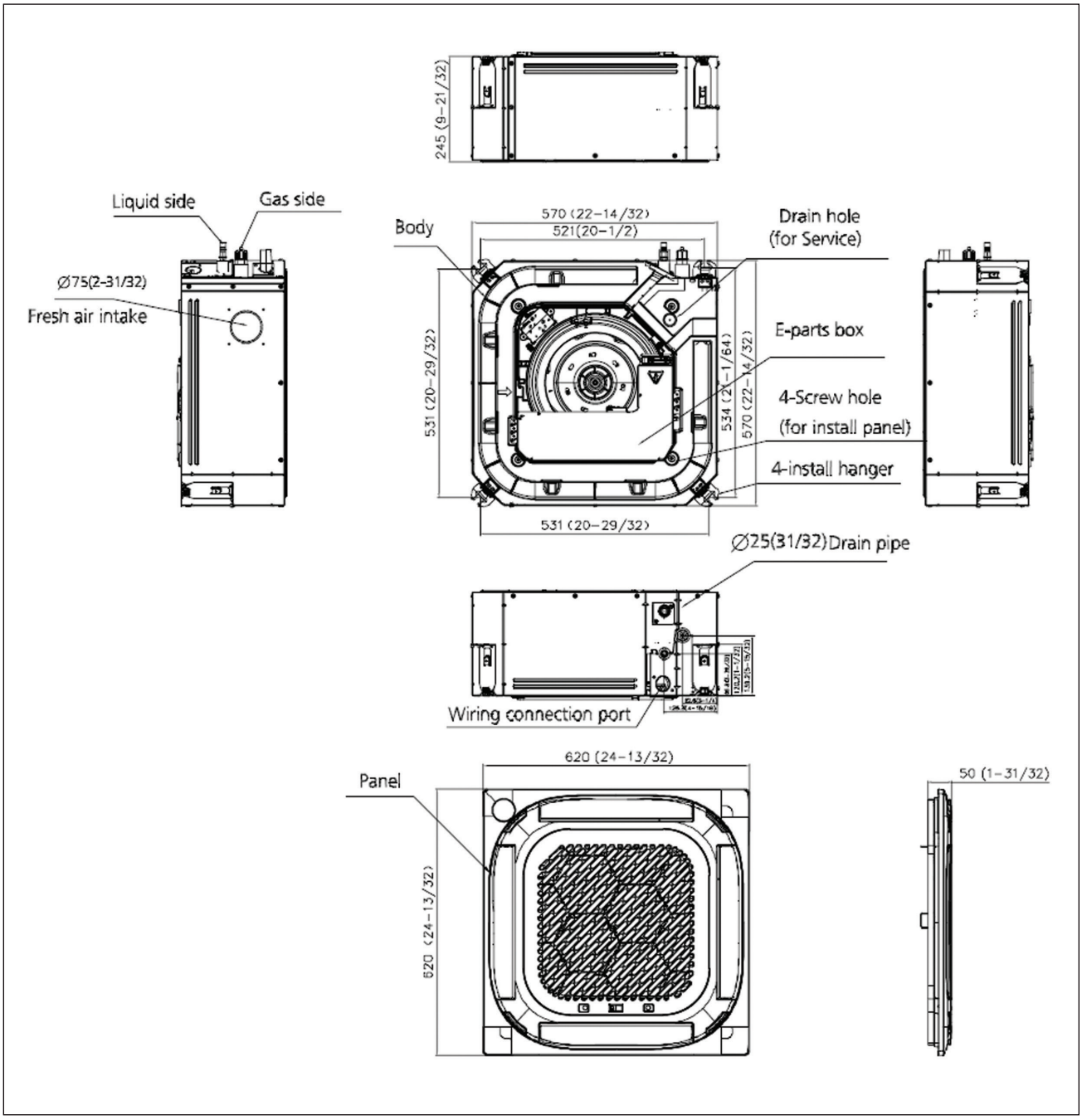


Capacité (kBtu/h)	Appareils	Dimensions hors tout				Taille de l'ouverture de sortie d'air		Taille de l'ouverture de reprise d'air		Taille de la patte de fixation		Taille de l'ouverture d'entrée d'air frais		Taille du tuyau de réfrigérant			
		A	B	C	D	E	F	G	H	I	J	K	L	H1	H2	W1	W2
9/12	mm	700	245	750	795	527	178	592	212	740	640	100	126	72	144	120	165
	pouce	27.6	9.6	29.5	31.3	20.7	7	23.3	8.3	29.1	25.2	3.9	5	2.8	5.7	4.7	6.5
18/24	mm	1000	245	750	795	827	178	892	212	1040	640	100	126	80	151	120	165
	pouce	39.4	9.6	29.5	31.3	32.6	7	35.1	8.3	40.9	25.2	3.9	5	3.1	5.9	4.7	6.5

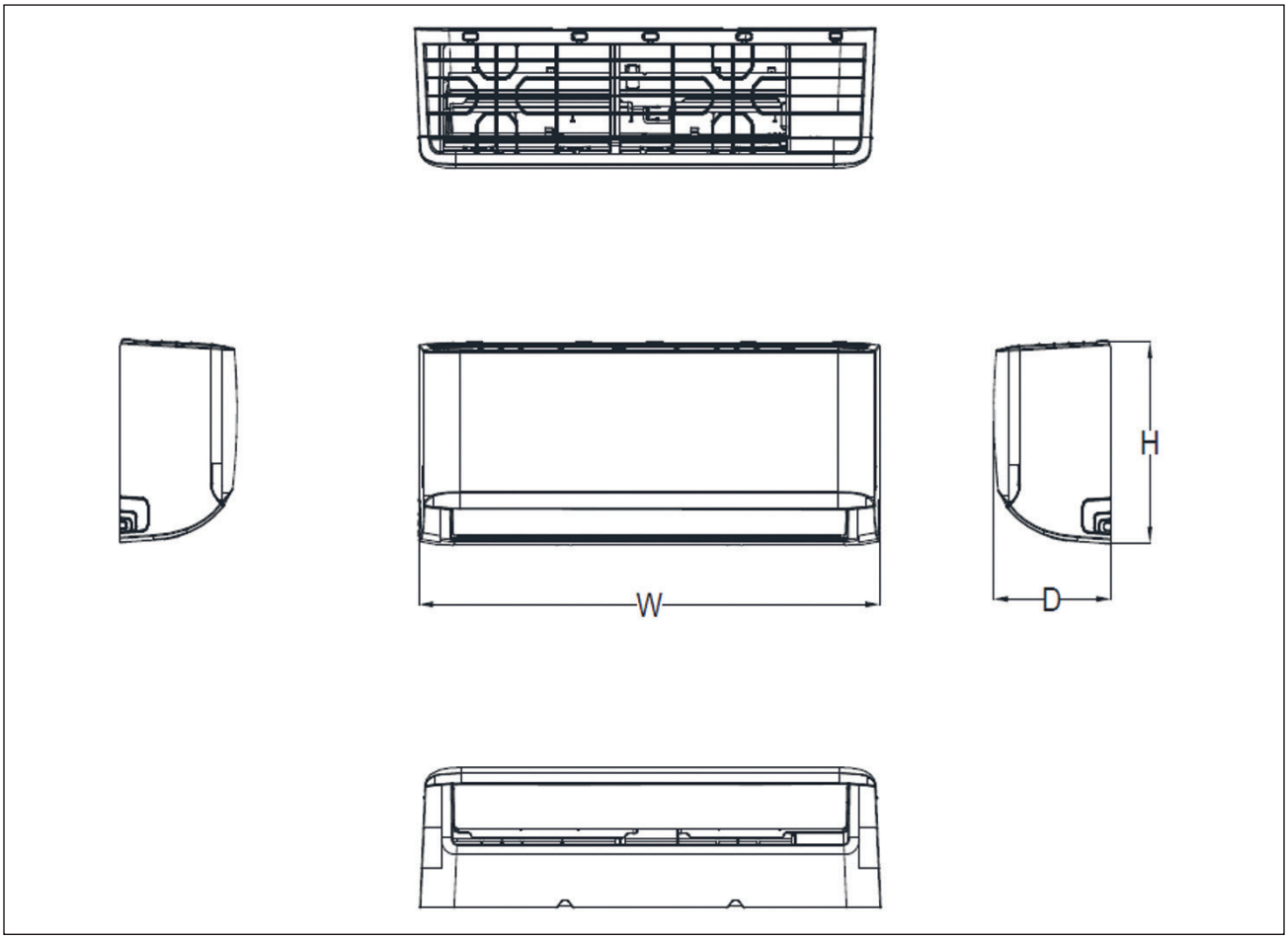
6.1.2. Type console



6.1.3. Type cassette compacte

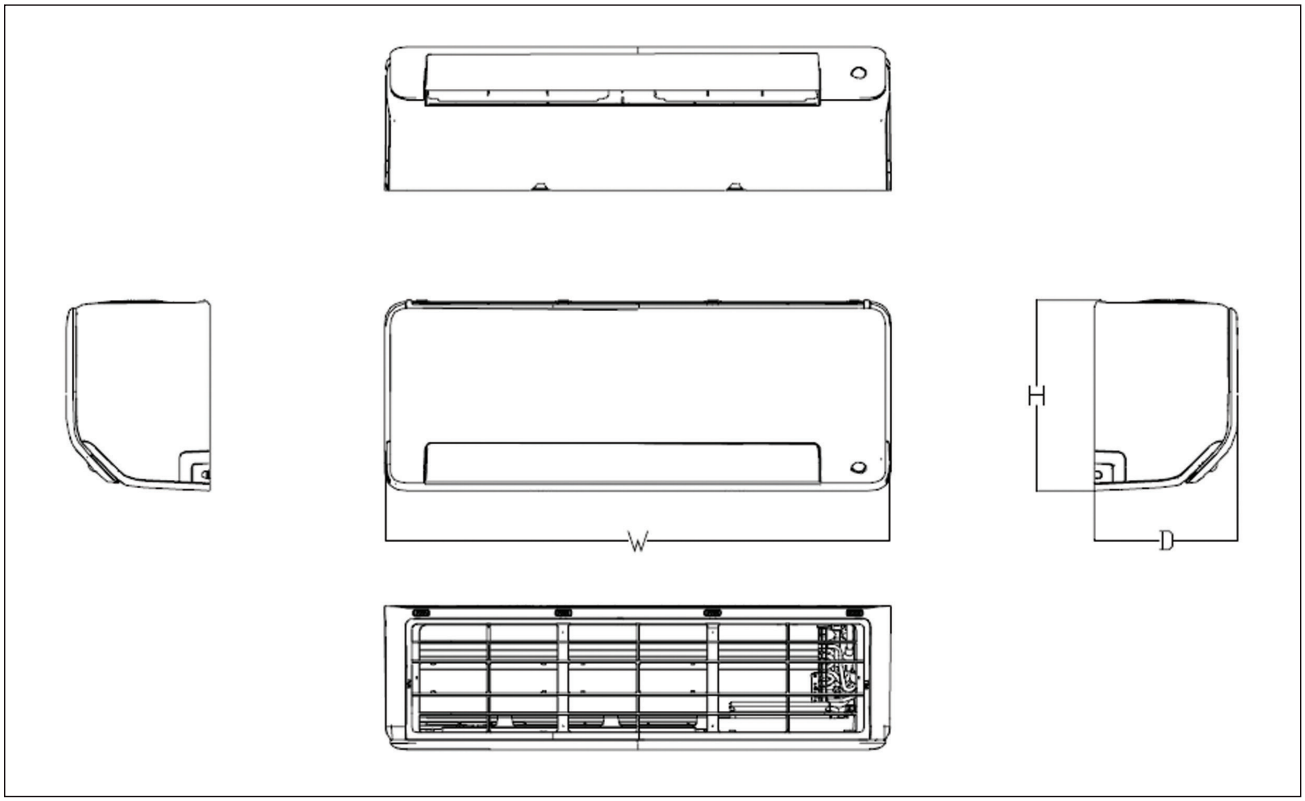


6.1.4. Haut de gamme mural



Modèle (kBtu/h)	L (mm/pouce)	P (mm/pouce)	H (mm/pouce)
6	729/28.7	200/7.87	292/11.5
9~12	802/31.57	200/7.87	295/11.61
18~24	1082/42.6	234/9.21	337/13.27
33	1259/49.57	1259/49.57	362/14.25

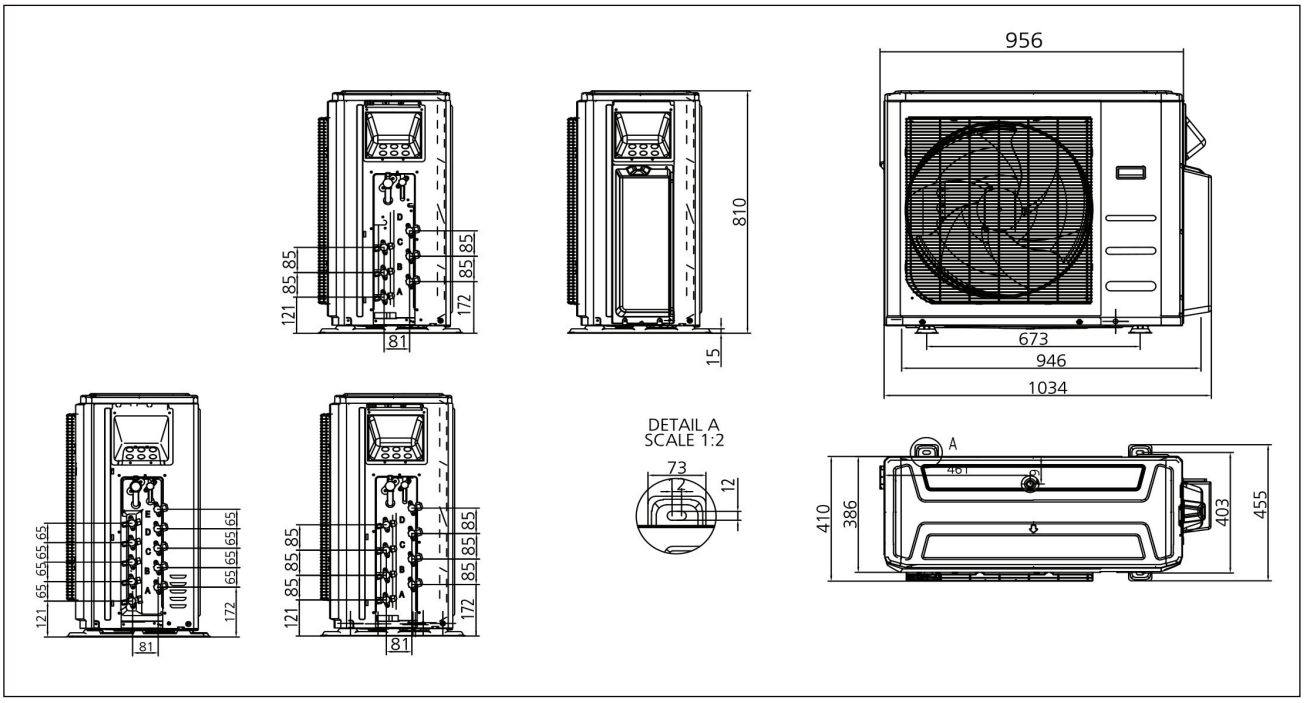
6.1.5. Murale haut de gamme



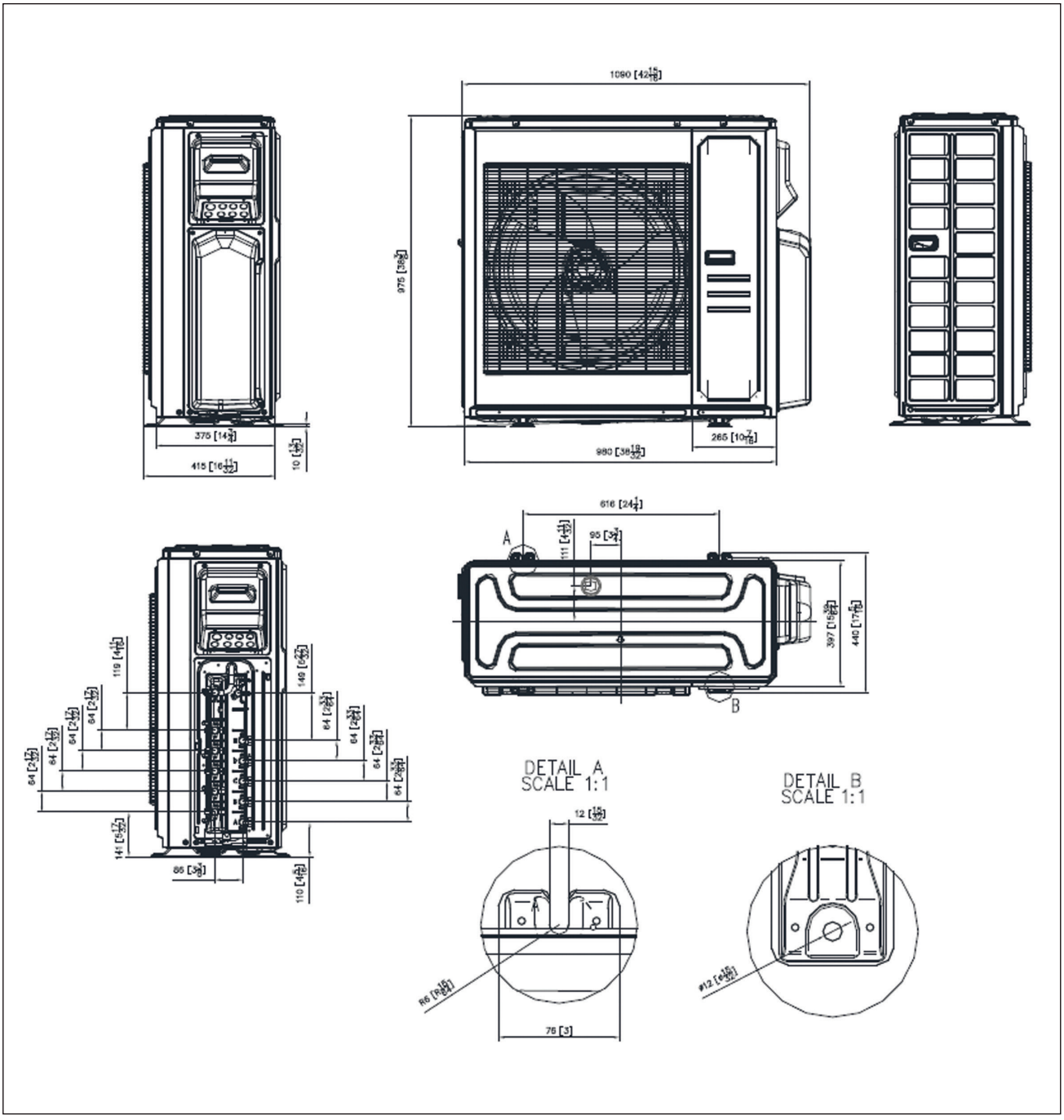
Modèle (kBtu/h)	L (mm/pouce)	P (mm/pouce)	H (mm/pouce)
6k~12k	795/31.3	225/8.86	295/11.61
18k	965/38	239/9.41	319/12.56
24k~33k	1140/44.88	275/10.83	370/14.57

6.2. Unité extérieure

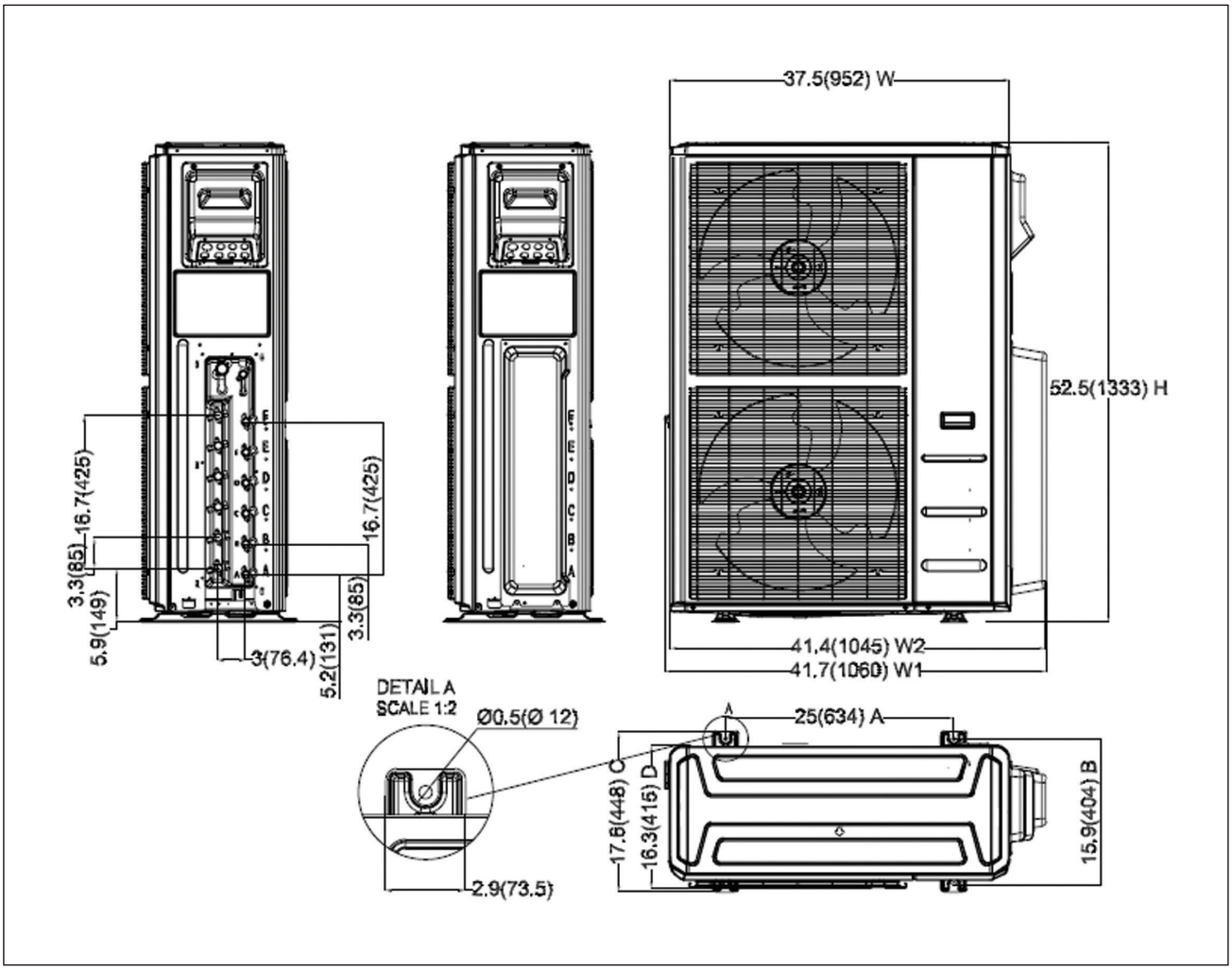
6.2.1. NDHAMBB-18-O



6.2.2. NDHAMBB-36-O

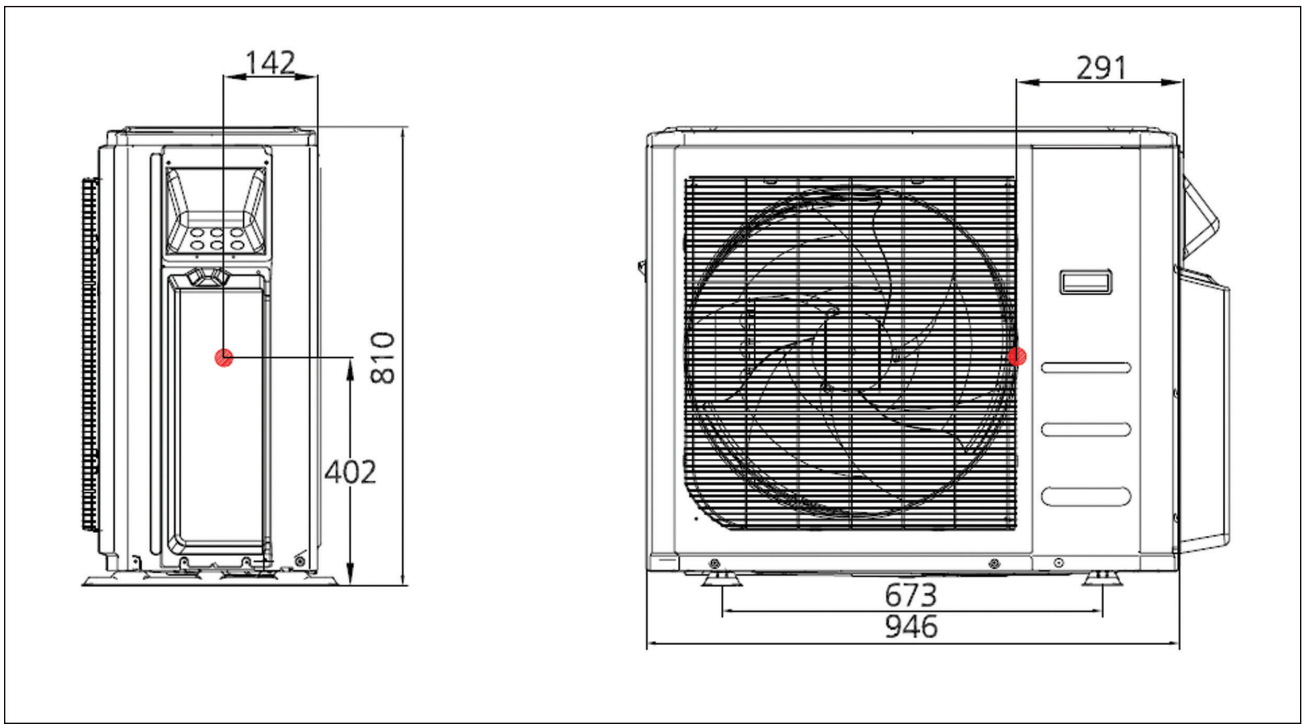


6.2.3. NDHAMBB-48-O

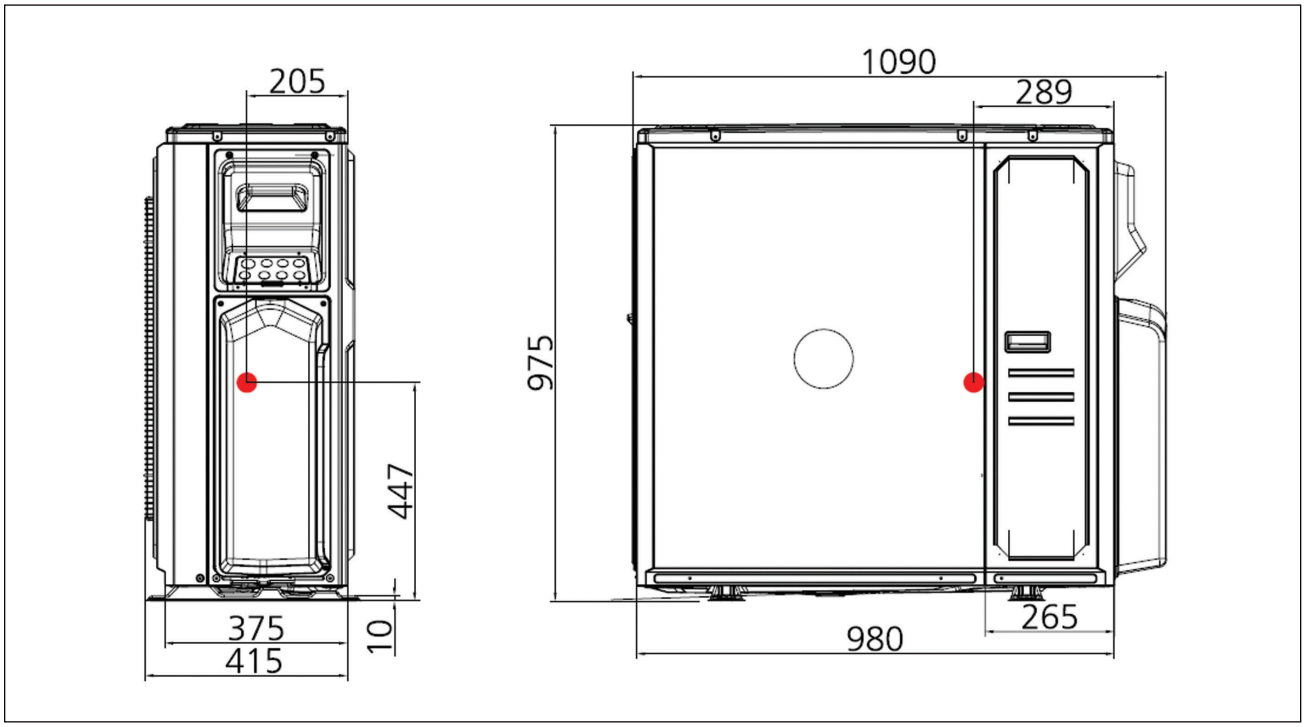


7. Centre de gravité

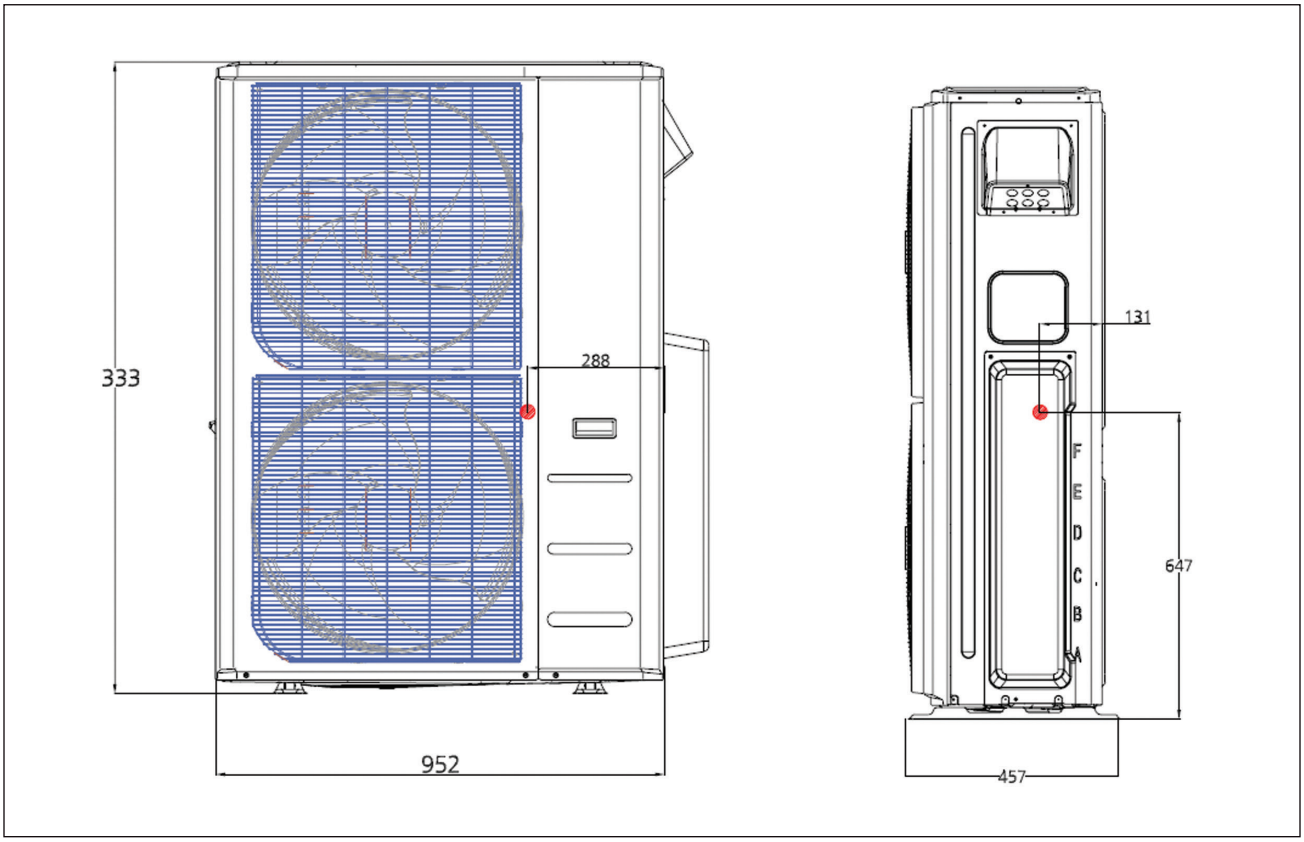
7.1. NDHAMBB-18-O, NDHAMBB-27-O



7.2. NDHAMBB-36-O



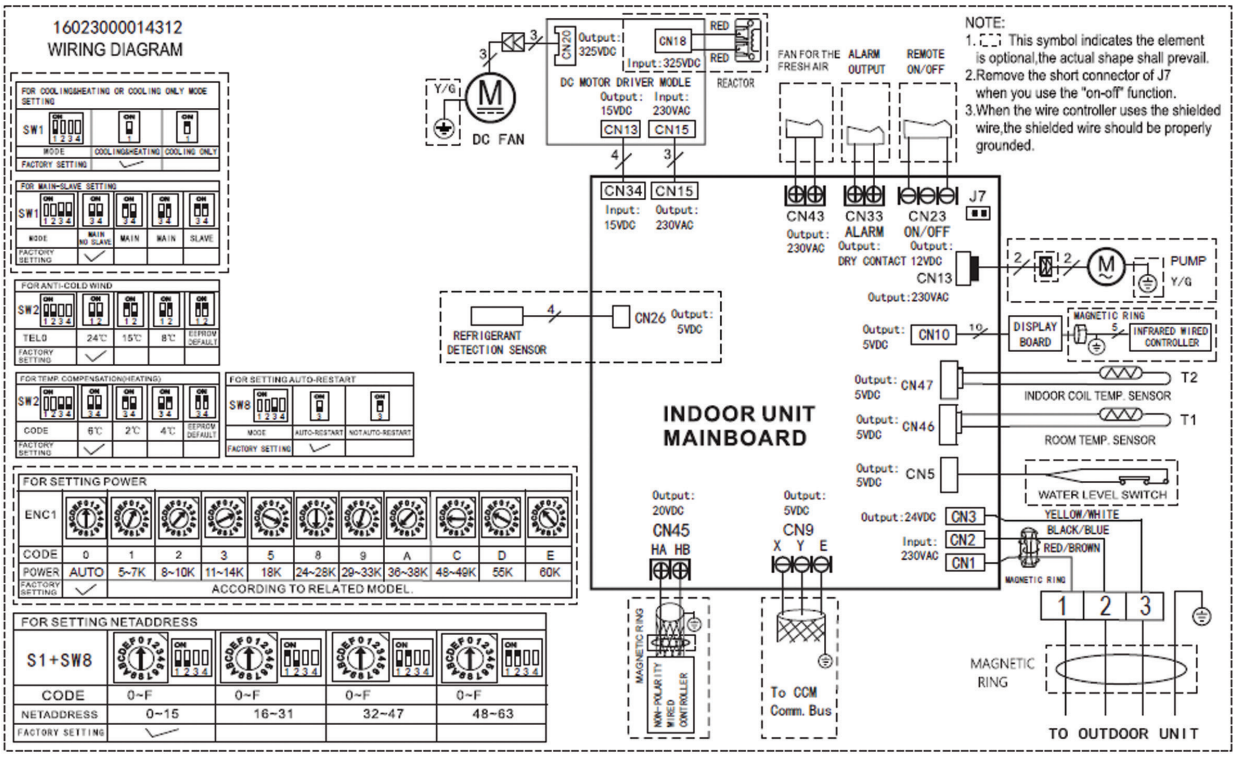
7.3. NDHAMBB-48-O



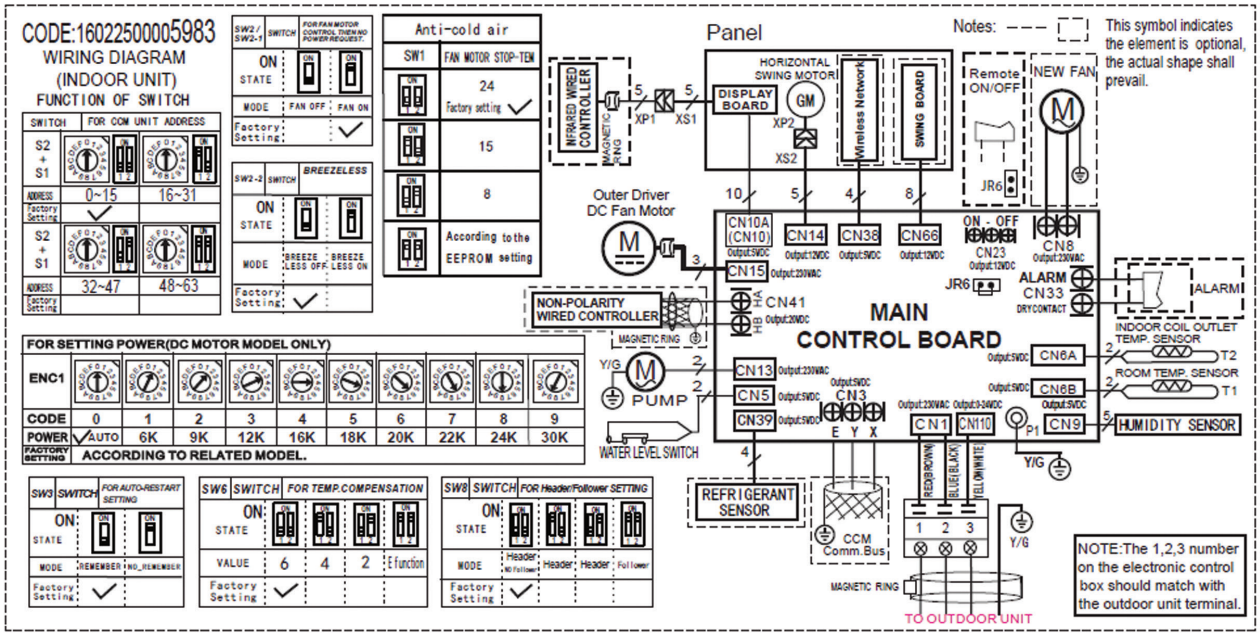
8. Schémas de câblage électrique

8.1. Unité intérieure

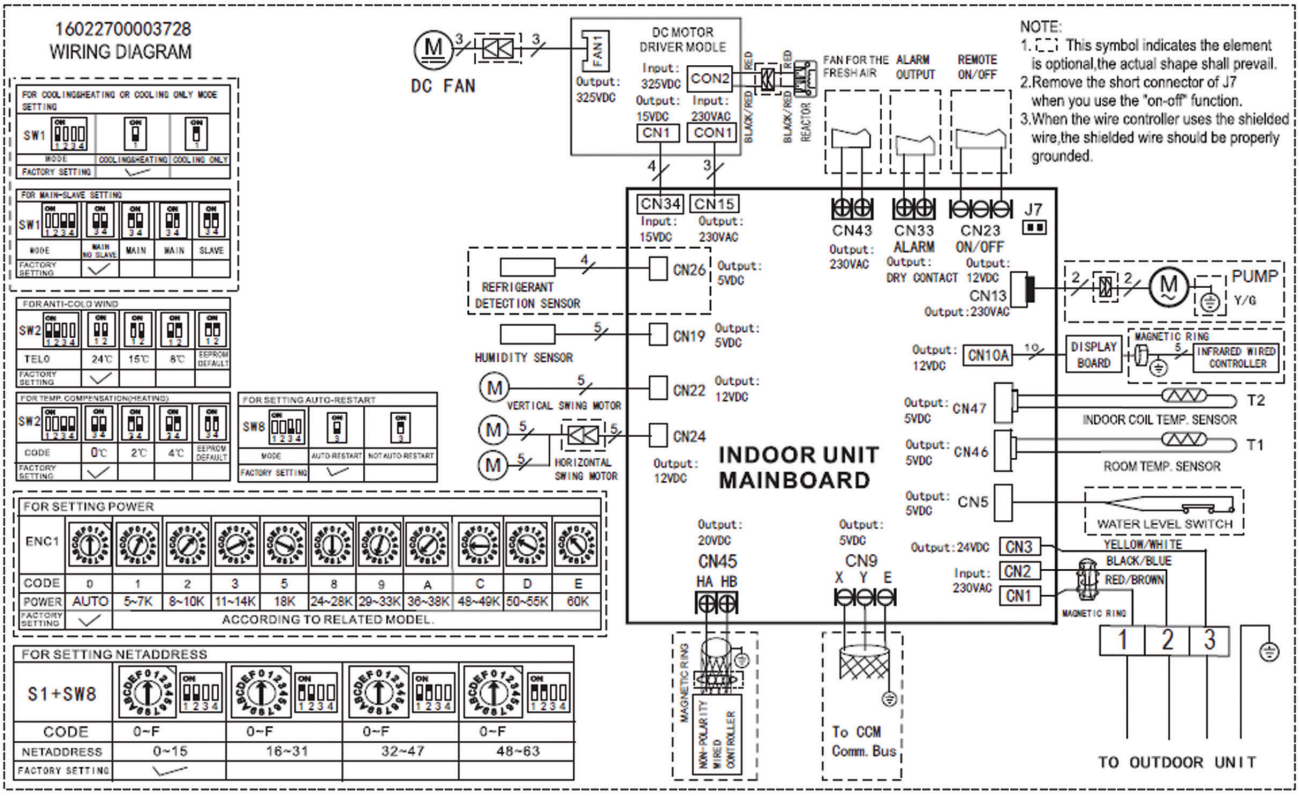
8.1.1. Unité gainable à haute pression statique



8.1.2. Type cassette compacte

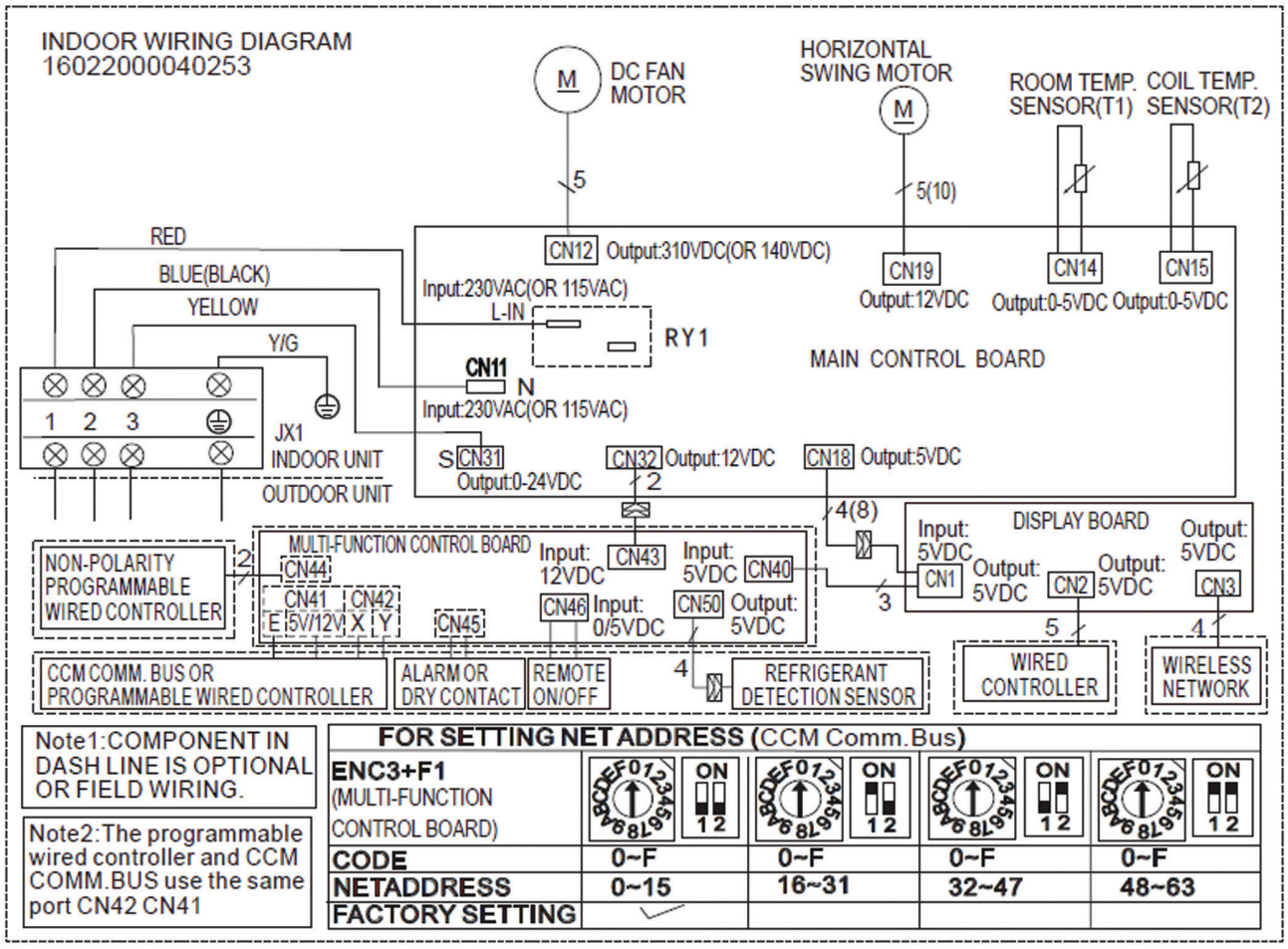


8.1.3. Type console de plancher

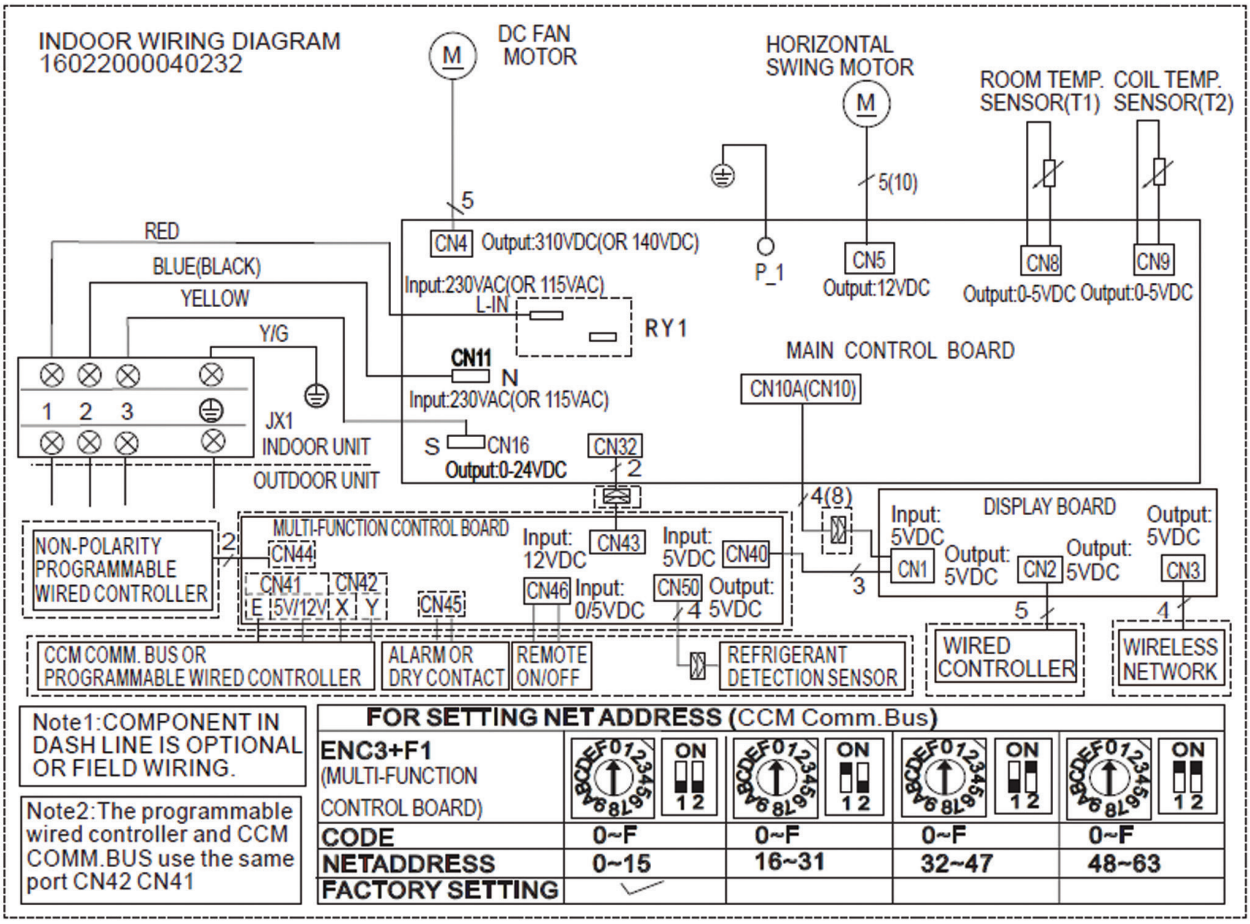


8.1.4. Haut de gamme mural

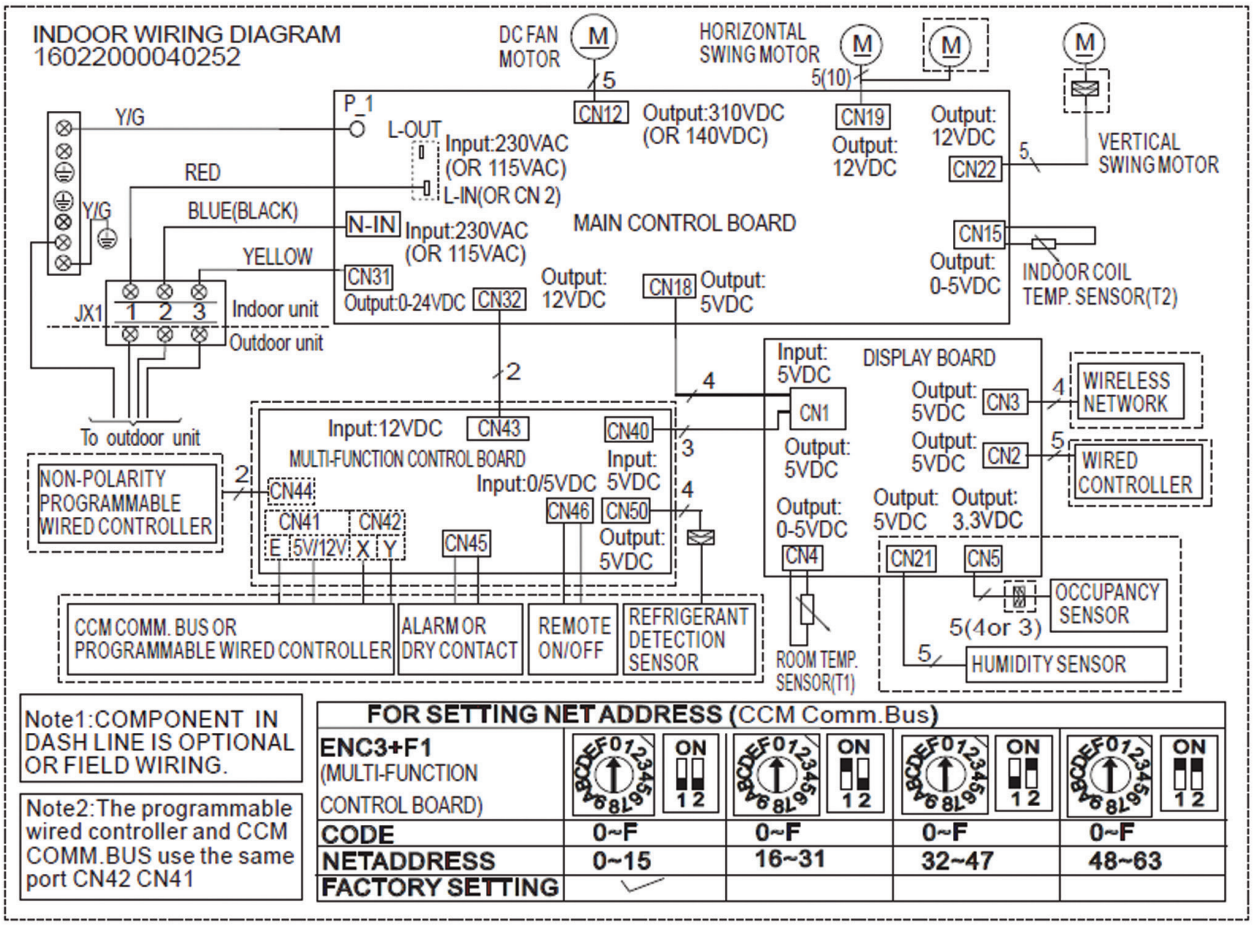
6k-12k



18k~33k

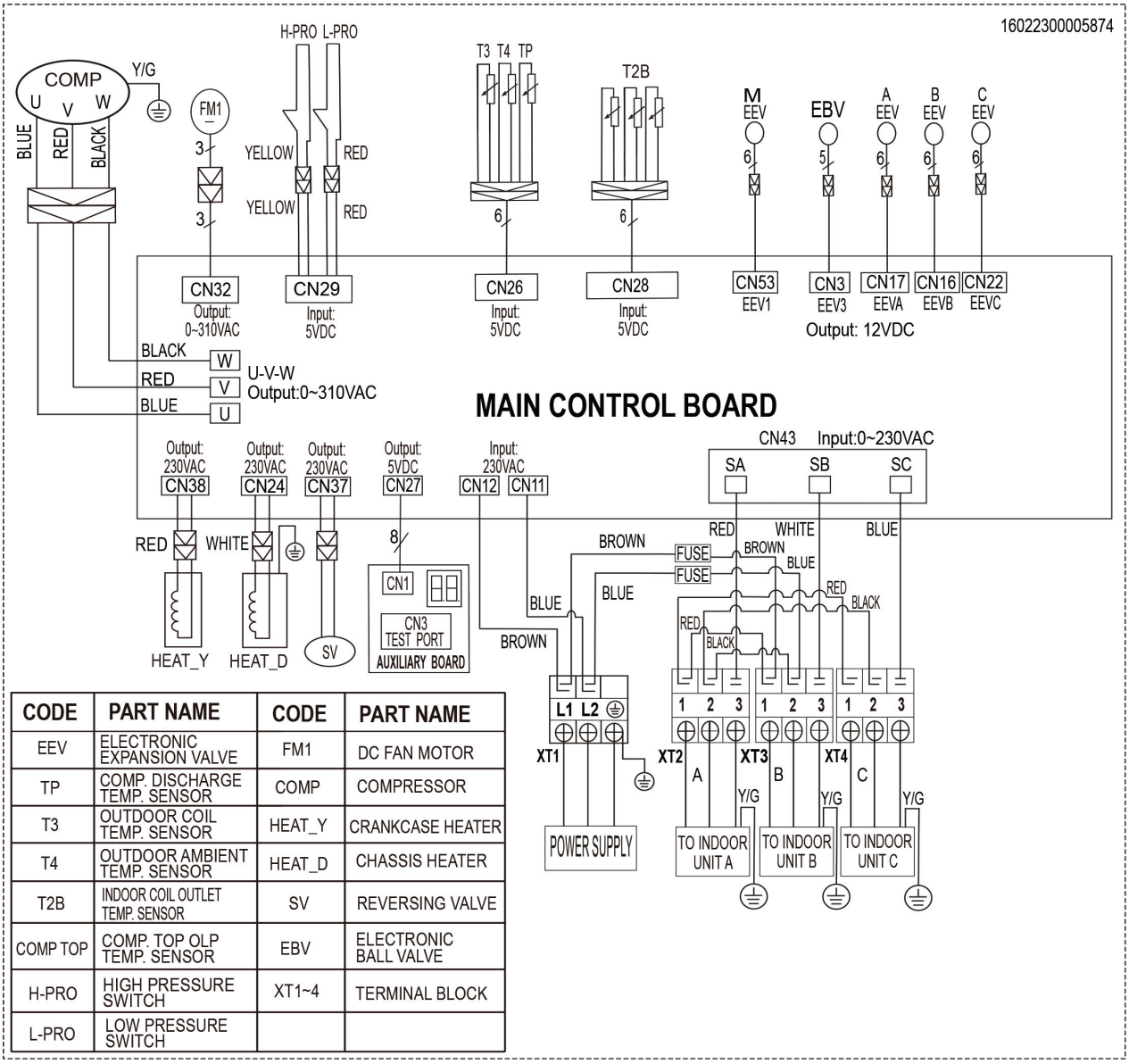

INDOOR WIRING DIAGRAM
16022000040232
DC FAN MOTOR
HORIZONTAL SWING MOTOR
ROOM TEMP. SENSOR(T1)
COIL TEMP. SENSOR(T2)
RED
BLUE(BLACK)
YELLOW
Y/G
CN4 Output:310VDC(OR 140VDC)
Input:230VAC(OR 115VAC)
L-IN
RY1
CN11
N
Input:230VAC(OR 115VAC)
S
CN16
Output:0-24VDC
CN32
P_1
CN5
Output:12VDC
CN8
Output:0-5VDC
CN9
Output:0-5VDC
MAIN CONTROL BOARD
CN10A(CN10)
JX1
INDOOR UNIT
OUTDOOR UNIT
NON-POLARITY PROGRAMMABLE WIRED CONTROLLER
MULTI-FUNCTION CONTROL BOARD
CN44
CN41
CN42
E 5V/12V X Y
CN45
Input: 12VDC
CN43
Input: 5VDC
CN40
CN46
Input: 0/5VDC
CN50
Output: 5VDC
DISPLAY BOARD
Input: 5VDC
CN1
Output: 5VDC
CN2
Output: 5VDC
Output: 5VDC
CN3
CCM COMM. BUS OR PROGRAMMABLE WIRED CONTROLLER
ALARM OR DRY CONTACT
REMOTE ON/OFF
REFRIGERANT DETECTION SENSOR
WIRED CONTROLLER
WIRELESS NETWORK
Note1:COMPONENT IN DASH LINE IS OPTIONAL OR FIELD WIRING.
Note2:The programmable wired controller and CCM COMM.BUS use the same port CN42 CN41
FOR SETTING NET ADDRESS (CCM Comm.Bus)
ENC3+F1 (MULTI-FUNCTION CONTROL BOARD)
ON
CODE
0~F
0~F
0~F
0~F
NETADDRESS
0~15
16~31
32~47
48~63
FACTORY SETTING

8.1.5. Murale haut de gamme



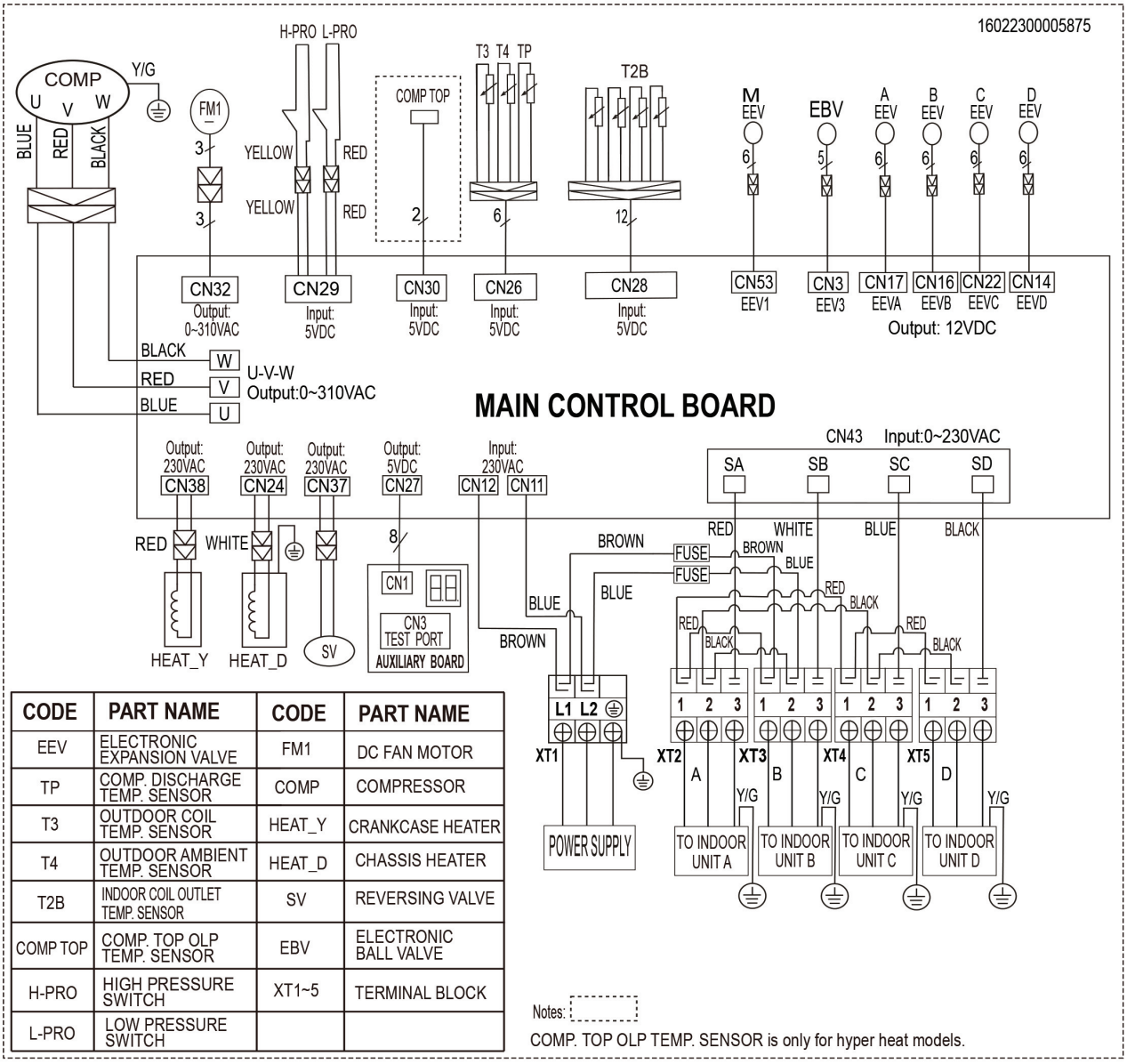
8.2. Unité extérieure

8.2.1. NDHAMBB-18-O



CODE	PART NAME	CODE	PART NAME
EEV	ELECTRONIC EXPANSION VALVE	FM1	DC FAN MOTOR
TP	COMP. DISCHARGE TEMP. SENSOR	COMP	COMPRESSOR
T3	OUTDOOR COIL TEMP. SENSOR	HEAT_Y	CRANKCASE HEATER
T4	OUTDOOR AMBIENT TEMP. SENSOR	HEAT_D	CHASSIS HEATER
T2B	INDOOR COIL OUTLET TEMP. SENSOR	SV	REVERSING VALVE
COMP TOP	COMP. TOP OLP TEMP. SENSOR	EBV	ELECTRONIC BALL VALVE
H-PRO	HIGH PRESSURE SWITCH	XT1~4	TERMINAL BLOCK
L-PRO	LOW PRESSURE SWITCH		

8.2.2. NDHAMBB-27-O

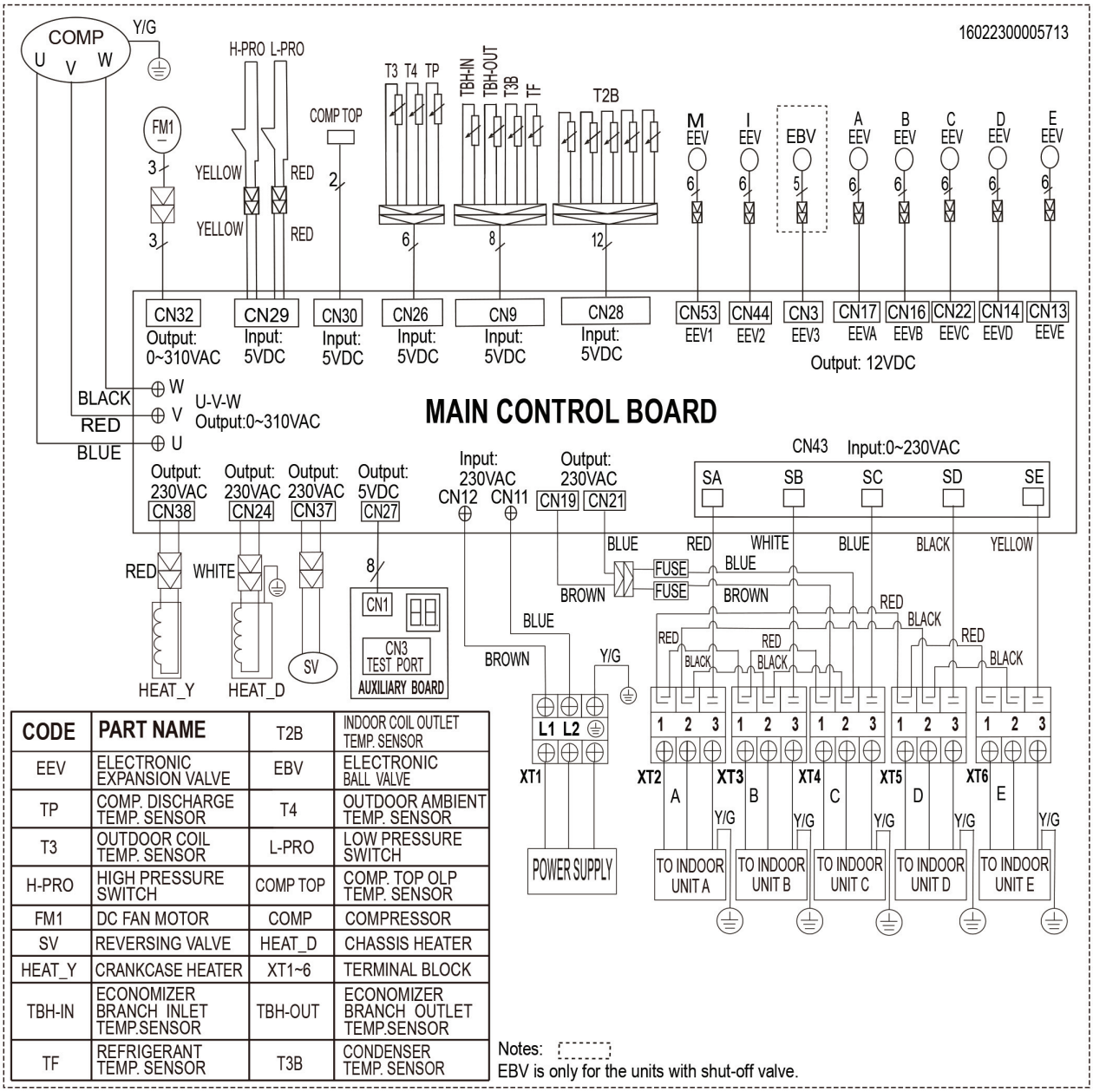


CODE	PART NAME	CODE	PART NAME
EEV	ELECTRONIC EXPANSION VALVE	FM1	DC FAN MOTOR
TP	COMP. DISCHARGE TEMP. SENSOR	COMP	COMPRESSOR
T3	OUTDOOR COIL TEMP. SENSOR	HEAT_Y	CRANKCASE HEATER
T4	OUTDOOR AMBIENT TEMP. SENSOR	HEAT_D	CHASSIS HEATER
T2B	INDOOR COIL OUTLET TEMP. SENSOR	SV	REVERSING VALVE
COMP TOP	COMP. TOP OLP TEMP. SENSOR	EBV	ELECTRONIC BALL VALVE
H-PRO	HIGH PRESSURE SWITCH	XT1~5	TERMINAL BLOCK
L-PRO	LOW PRESSURE SWITCH		

Notes:

COMP. TOP OLP TEMP. SENSOR is only for hyper heat models.

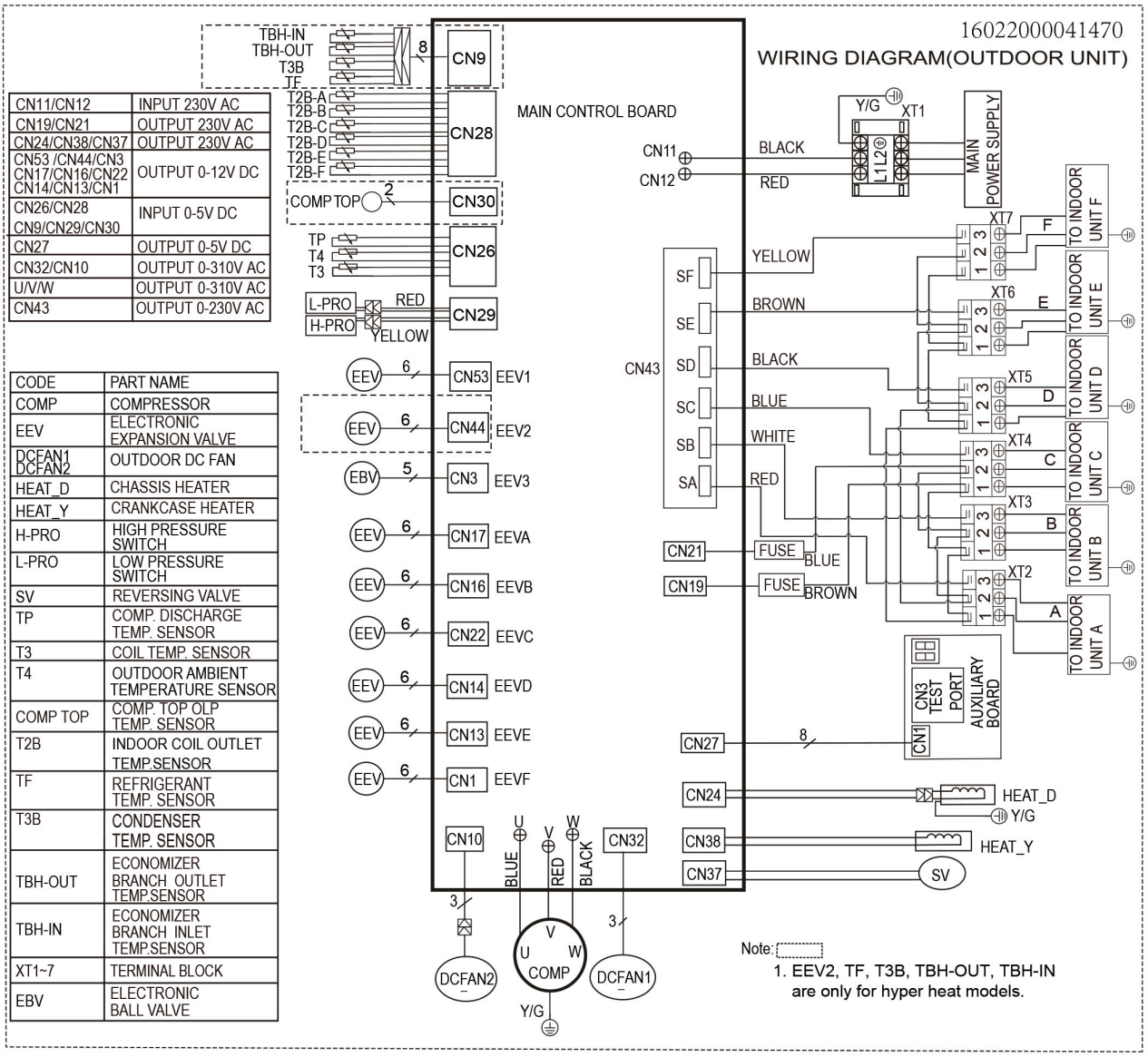
8.2.3. NDHAMBB-36-O



CODE	PART NAME	T2B	INDOOR COIL OUTLET TEMP. SENSOR
EEV	ELECTRONIC EXPANSION VALVE	EBV	ELECTRONIC BALL VALVE
TP	COMP. DISCHARGE TEMP. SENSOR	T4	OUTDOOR AMBIENT TEMP. SENSOR
T3	OUTDOOR COIL TEMP. SENSOR	L-PRO	LOW PRESSURE SWITCH
H-PRO	HIGH PRESSURE SWITCH	COMP TOP	COMP. TOP OLP TEMP. SENSOR
FM1	DC FAN MOTOR	COMP	COMPRESSOR
SV	REVERSING VALVE	HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER	XT1~6	TERMINAL BLOCK
TBH-IN	ECONOMIZER BRANCH INLET TEMP.SENSOR	TBH-OUT	ECONOMIZER BRANCH OUTLET TEMP.SENSOR
TF	REFRIGERANT TEMP. SENSOR	T3B	CONDENSER TEMP. SENSOR

Notes:
EBV is only for the units with shut-off valve.

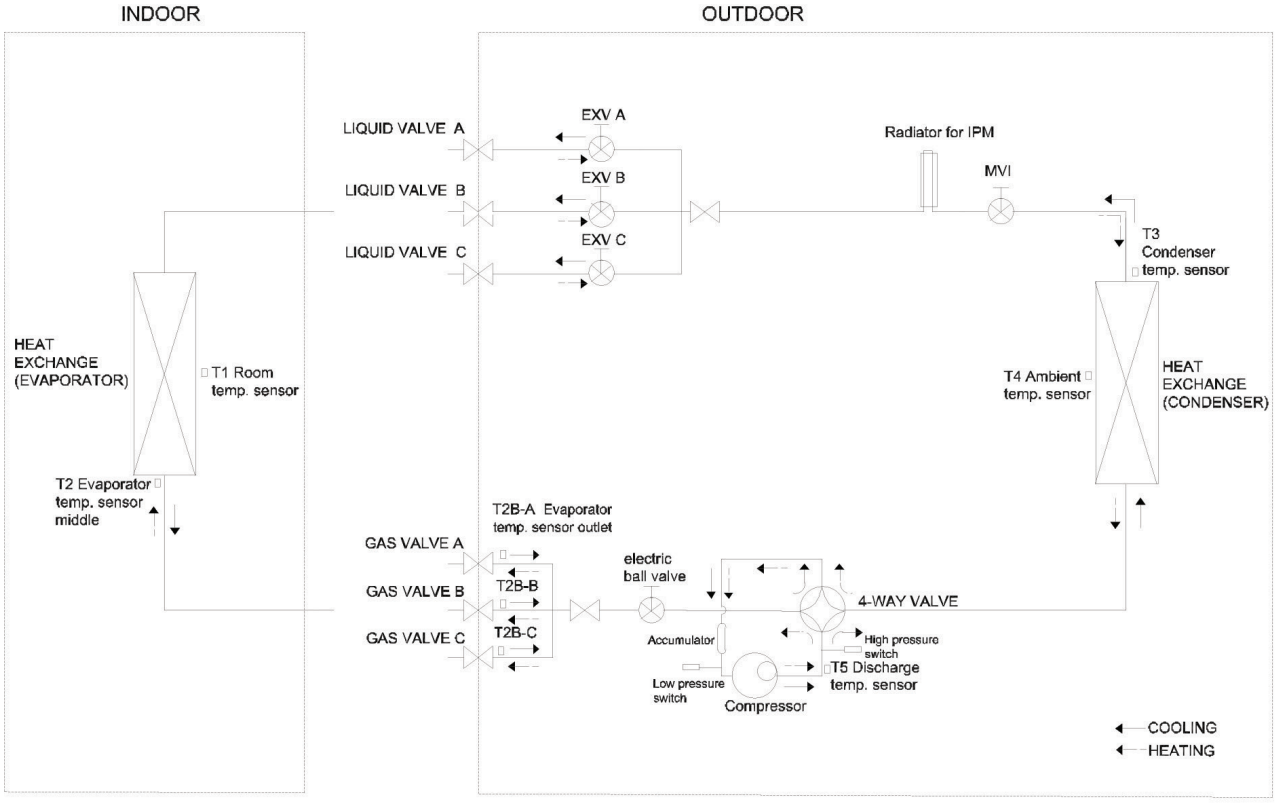
8.2.4. NDHAMBB-48-O



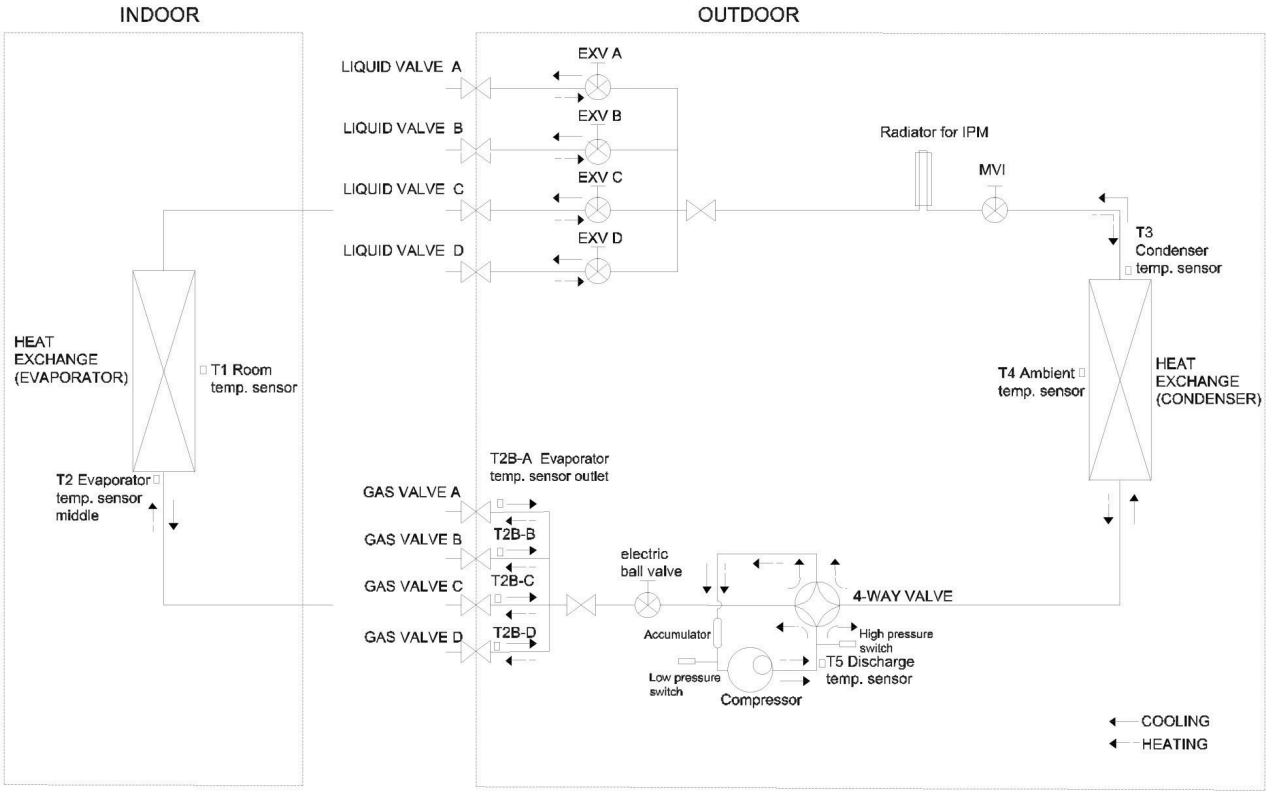
CN11/CN12	INPUT 230V AC
CN19/CN21	OUTPUT 230V AC
CN24/CN38/CN37	OUTPUT 230V AC
CN53 /CN44/CN3 CN17/CN16/CN22 CN14/CN13/CN1	OUTPUT 0-12V DC
CN26/CN28 CN9/CN29/CN30	INPUT 0-5V DC
CN27	OUTPUT 0-5V DC
CN32/CN10	OUTPUT 0-310V AC
U/V/W	OUTPUT 0-310V AC
CN43	OUTPUT 0-230V AC

CODE	PART NAME
COMP	COMPRESSOR
EEV	ELECTRONIC EXPANSION VALVE
DCFAN1 DCFAN2	OUTDOOR DC FAN
HEAT_D	CHASSIS HEATER
HEAT_Y	CRANKCASE HEATER
H-PRO	HIGH PRESSURE SWITCH
L-PRO	LOW PRESSURE SWITCH
SV	REVERSING VALVE
TP	COMP. DISCHARGE TEMP. SENSOR
T3	COIL TEMP. SENSOR
T4	OUTDOOR AMBIENT TEMPERATURE SENSOR
COMP TOP	COMP. TOP OLP TEMP. SENSOR
T2B	INDOOR COIL OUTLET TEMP.SENSOR
TF	REFRIGERANT TEMP. SENSOR
T3B	CONDENSER TEMP. SENSOR
TBH-OUT	ECONOMIZER BRANCH OUTLET TEMP.SENSOR
TBH-IN	ECONOMIZER BRANCH INLET TEMP.SENSOR
XT1~7	TERMINAL BLOCK
EBV	ELECTRONIC BALL VALVE

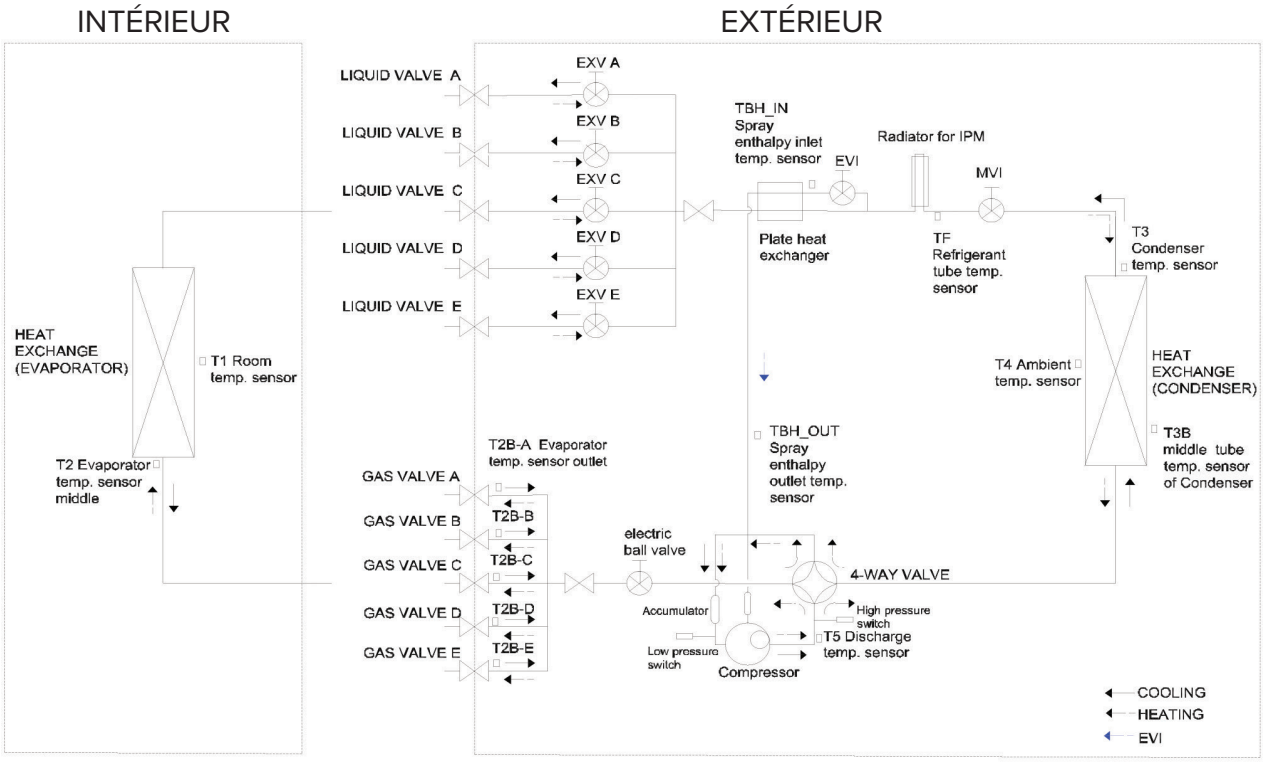
9. Schémas du cycle de réfrigération



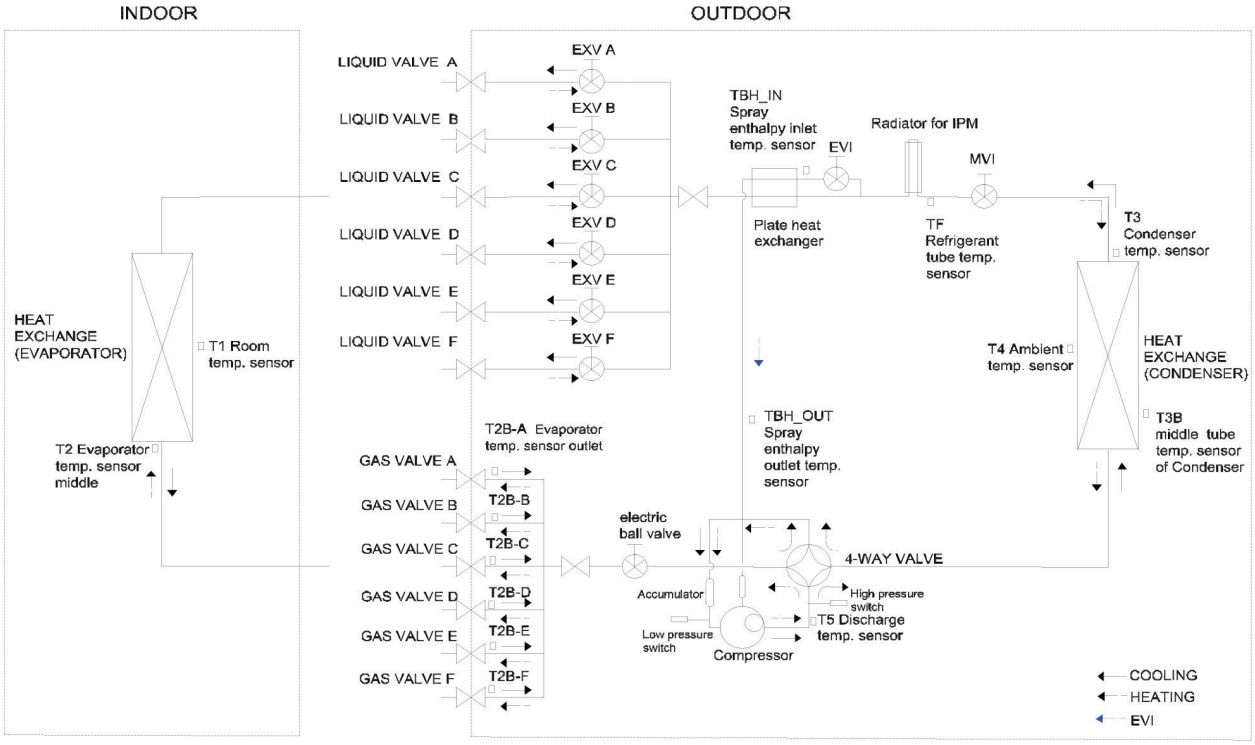
Modèle	Taille du tuyau (diamètre : ø)		Longueur de tuyauterie (m)			Élévation		Réfrigérant supplémentaire
			Nominal	Max				
	Gaz	Liquide		Simple	Total	IDU et ODU	Entre Unités intérieures	
NDHAMBB-18-O	3x9.52	3x6.35	22.5	30	60	15	10	15g/m



Modèle	Taille du tuyau (diamètre : ø)		Longueur de tuyauterie (m)			Élévation		Réfrigérant supplémentaire
			Nominal	Max				
	Gaz	Liquide		Simple	Total	IDU et ODU	Entre Unités intérieures	
NDHAMBB-27-O	3x9.52 + 1x12.7	4x6.35	30	35	80	15	10	15g/m



Modèle	Taille du tuyau (diamètre : ø)		Longueur de tuyauterie (m)			Élévation		Réfrigérant supplémentaire
			Nominal	Max				
	Gaz	Liquide		Simple	Total	IDU et ODU	Entre Unités intérieures	
NDHAMBB-36-O	3x9.52 + 2x12.7	5x6.35	37.5	35	80	15	10	15g/m

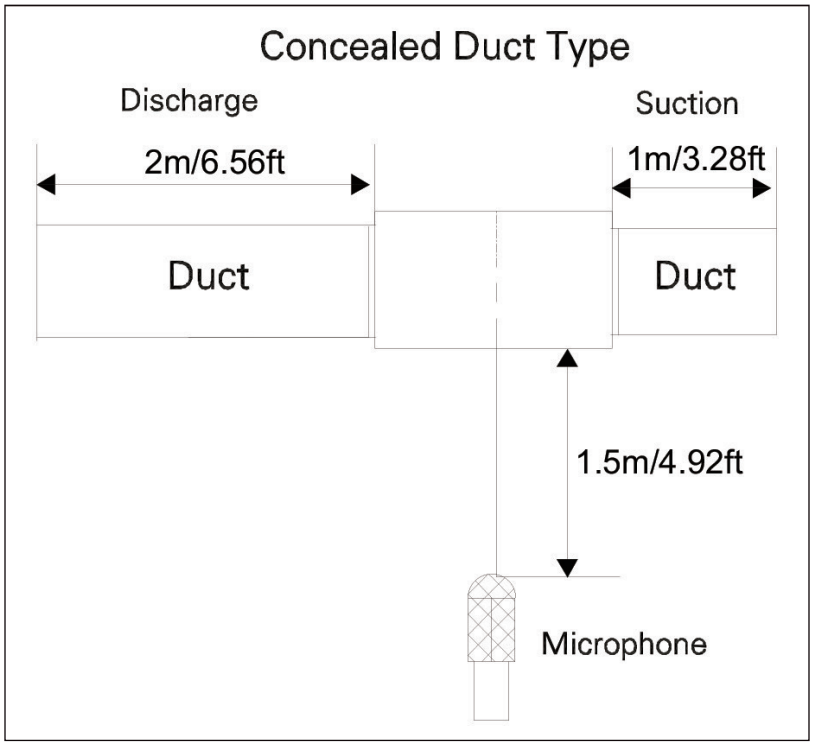


Modèle	Taille du tuyau (diamètre : ø)		Longueur de tuyauterie (m)			Élévation		Réfrigérant supplémentaire
			Nominal	Max				
	Gaz	Liquide		Simple	Total	IDU et ODU	Entre Unités intérieures	
NDHAMBB-O-	4x9.52 + 2x12.7	6x6.35	37.5	35	80	15	10	15g/m

10. Courbes de critère de bruit

10.1. Unité intérieure

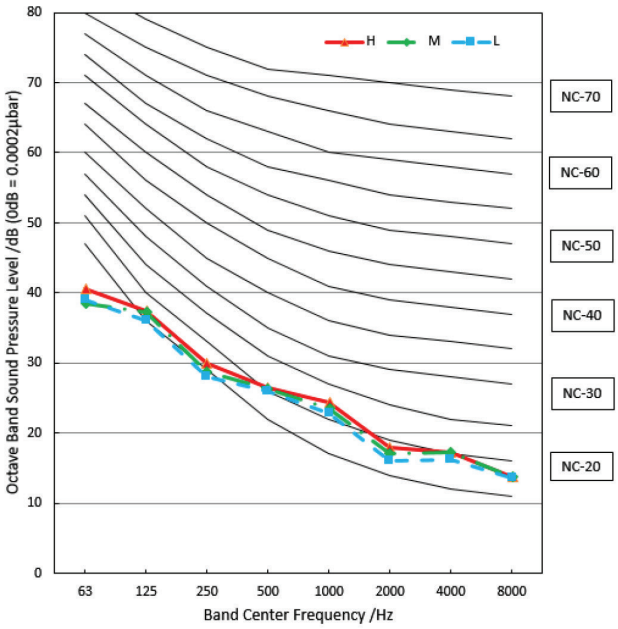
10.1.1. Unité gainable à haute pression statique



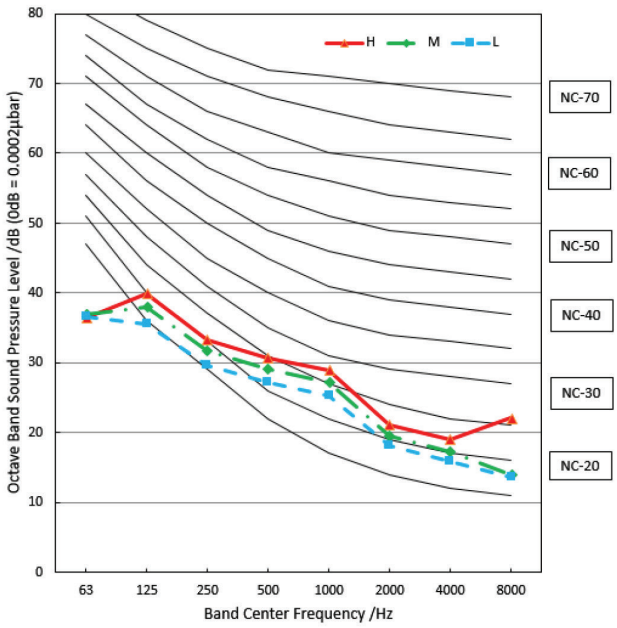
Remarques :

- Son mesuré à 1,5 m/4,92 pi du centre de l'unité.
- Les données sont valides dans des conditions de fonctionnement nominales.
- Pression acoustique de référence 0 dB = 20 µPa
- Le niveau sonore variera selon divers facteurs, tels que la construction – (coefficient d'absorption acoustique) de la pièce particulière où l'équipement est installé.
- Les conditions de fonctionnement sont supposées être standards.

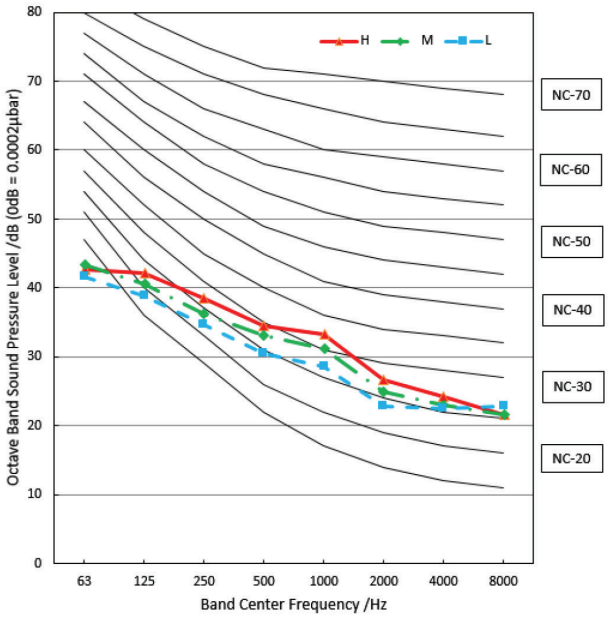
NDHASHDBB-09



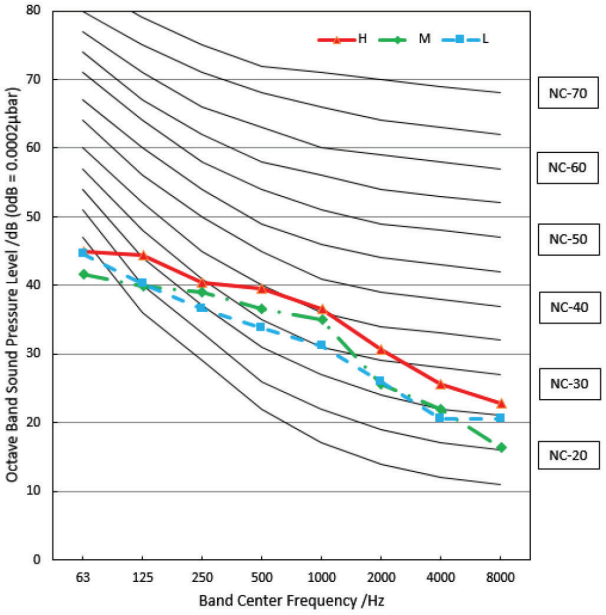
NDHASHDBB-12



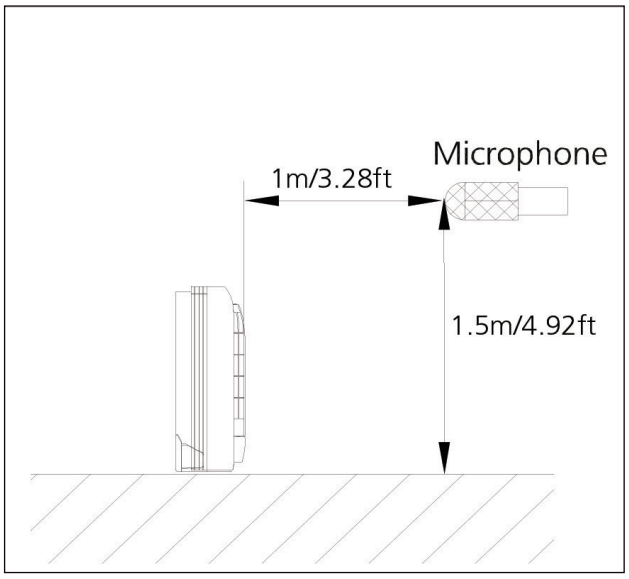
NDHASHDBB-18



NDHASDHBB-24



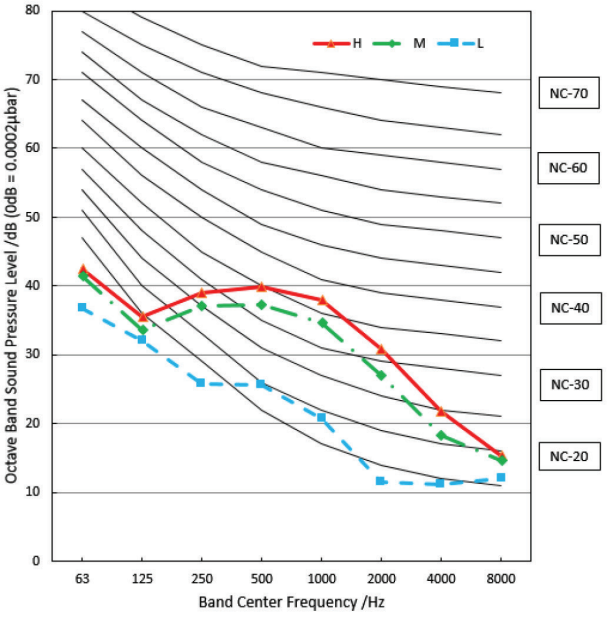
10.1.2. Type console de plancher



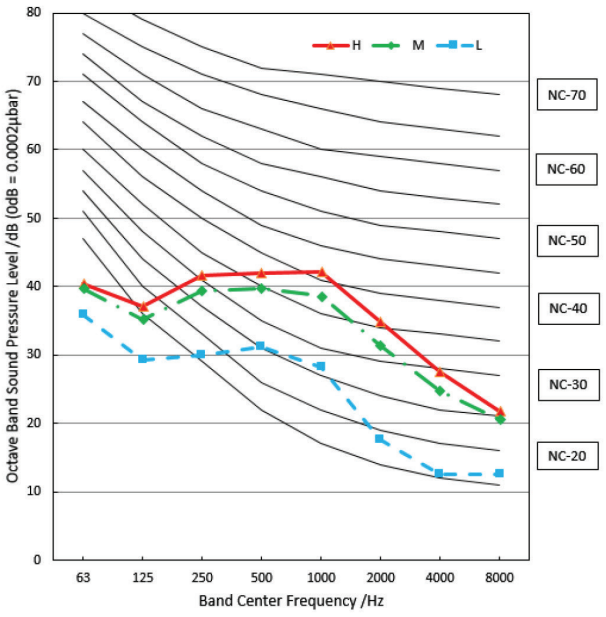
Remarques :

- Son mesuré à 1 m/3,28 pi de l'unité et à 1,5 m/4,92 pi du sol.
- Les données sont valides dans des conditions de fonctionnement nominales.
- Pression acoustique de référence 0 dB = 20 µPa
- Le niveau sonore variera selon divers facteurs, tels que la construction (coefficient d'absorption acoustique) de la pièce particulière où l'équipement est installé.
- Les conditions de fonctionnement sont supposées être standards.

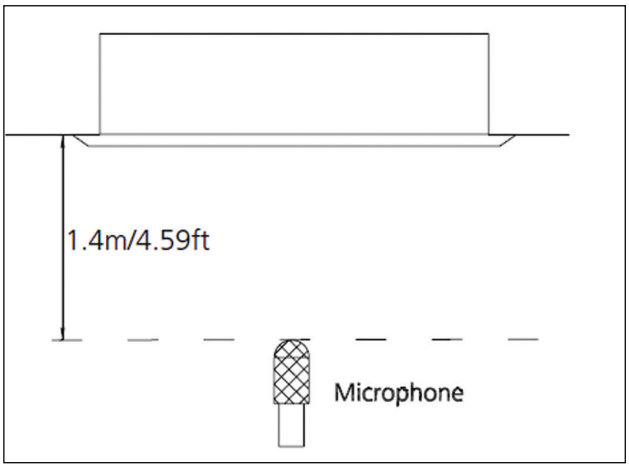
NDHASCBB-12



NDHASCBB-18



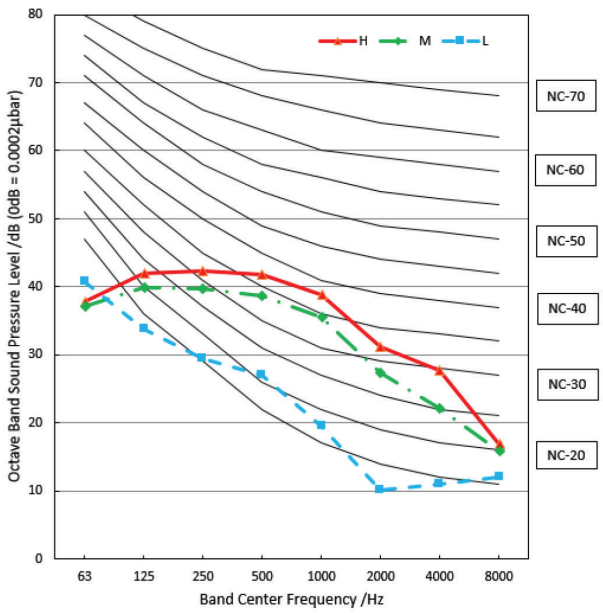
10.1.3. Type cassette compacte



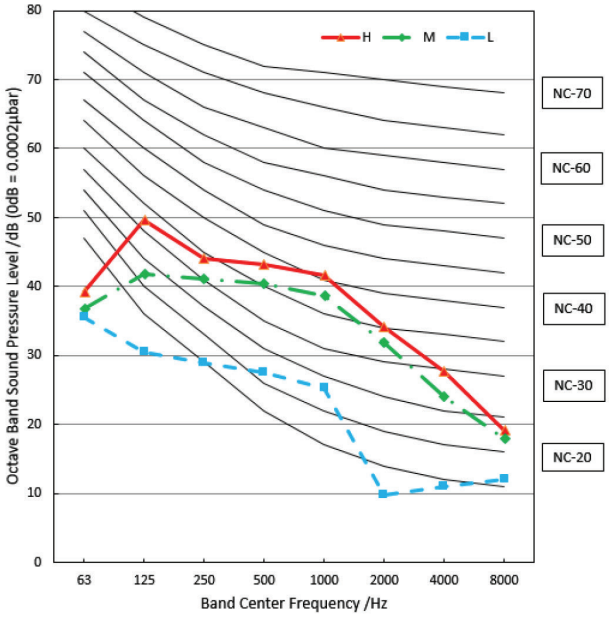
Remarques :

- Son mesuré à 1,4 m/4,59 pi de l'endroit le plus bruyant de l'unité.
- Les données sont valides dans des conditions de fonctionnement nominales
- Pression acoustique de référence 0 dB = 20 µPa
- Le niveau sonore variera selon divers facteurs, tels que la construction (coefficient d'absorption acoustique) de la pièce particulière où l'équipement est installé.
- Les conditions de fonctionnement sont supposées être standards.

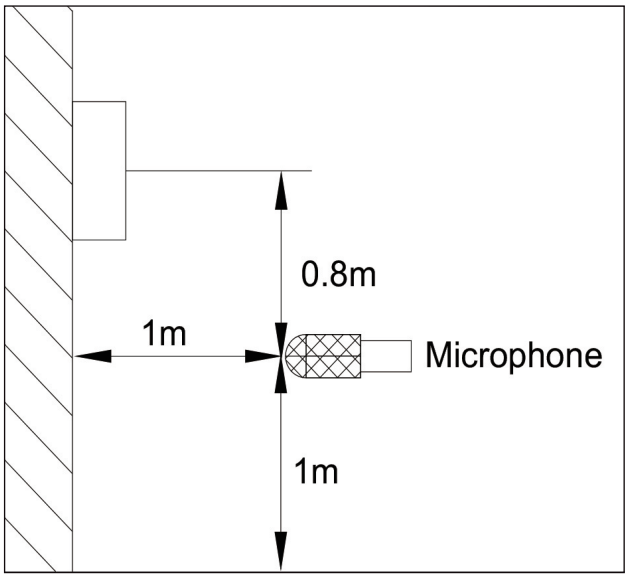
NDHAS4CBB-12



NDHAS4CBB-18



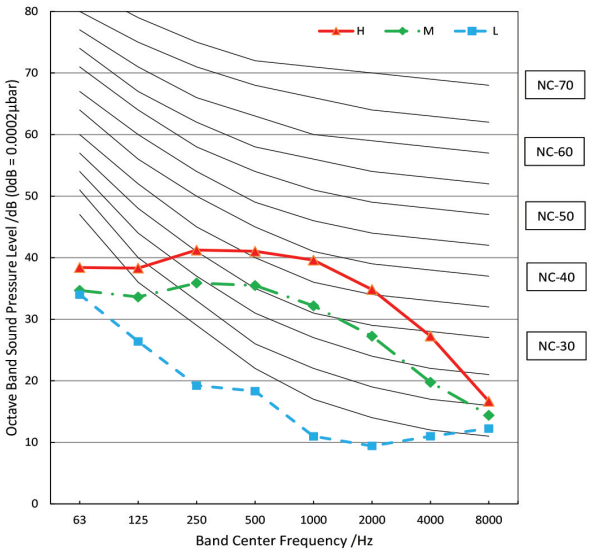
10.1.4. Types muraux hauts



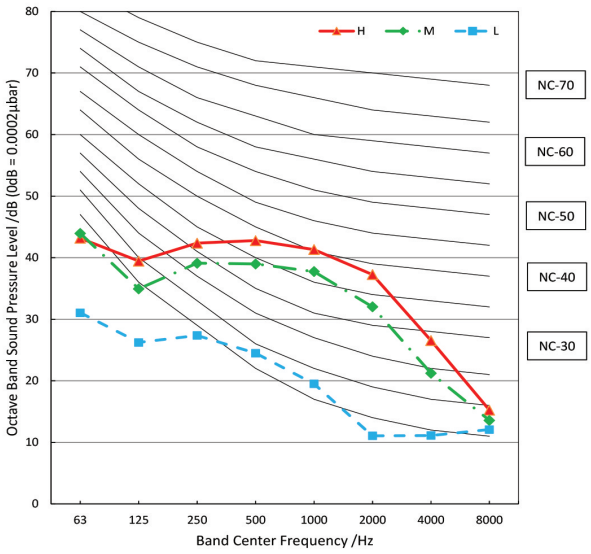
Remarques :

- Son mesuré à 1,0 m du centre de l'unité.
- Les données sont valides dans des conditions de fonctionnement nominales
- Pression acoustique de référence 0 dB = 20 µPa
- Le niveau sonore variera selon divers facteurs, tels que la construction (coefficient d'absorption acoustique) de la pièce particulière où l'équipement est installé.
- Les conditions de fonctionnement sont supposées être standards.

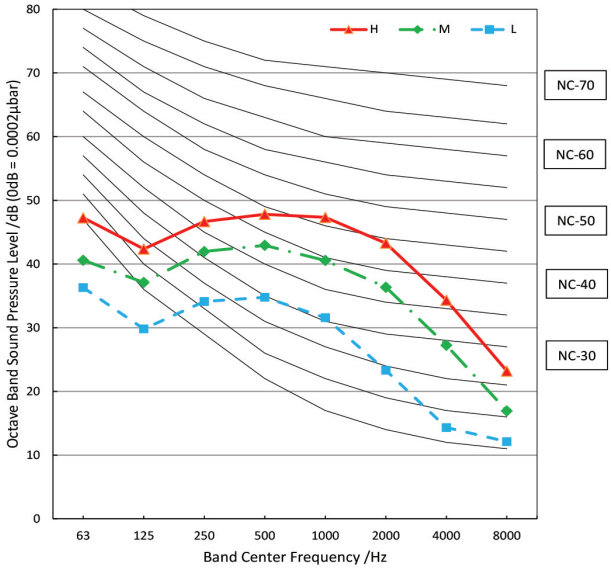
NDHAS22BB-12-I



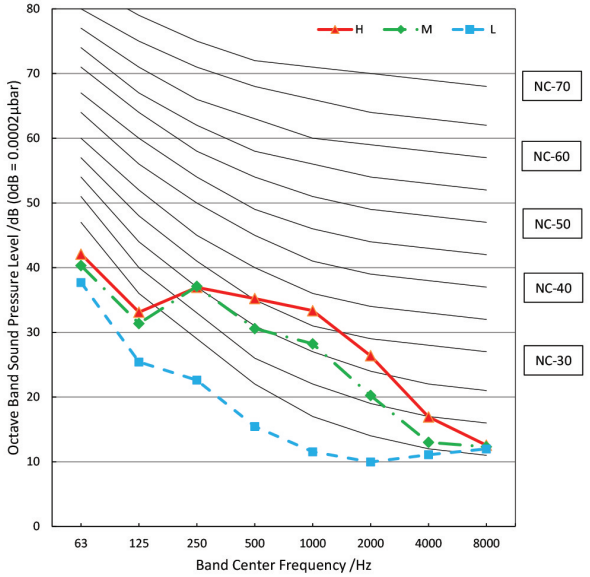
NDHAS22BB-18-I



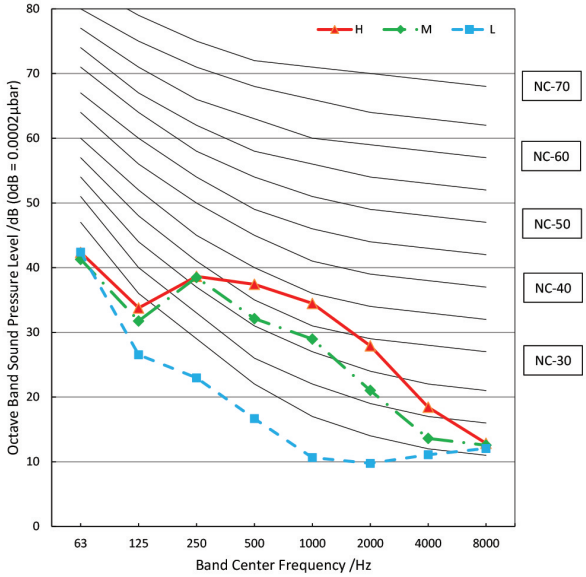
NDHAS22BB-24-I



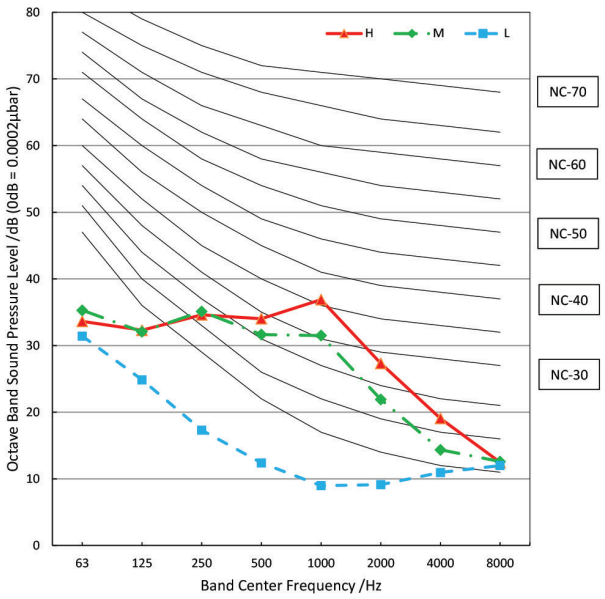
NDHASBB--06-I



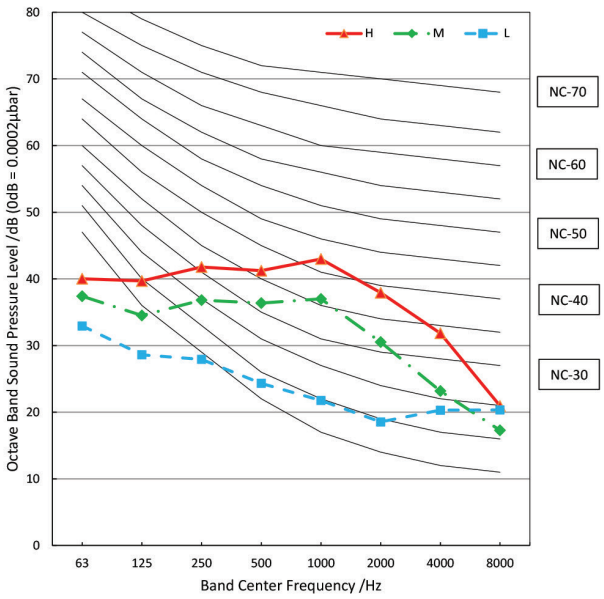
NDHAS26BB-09-I



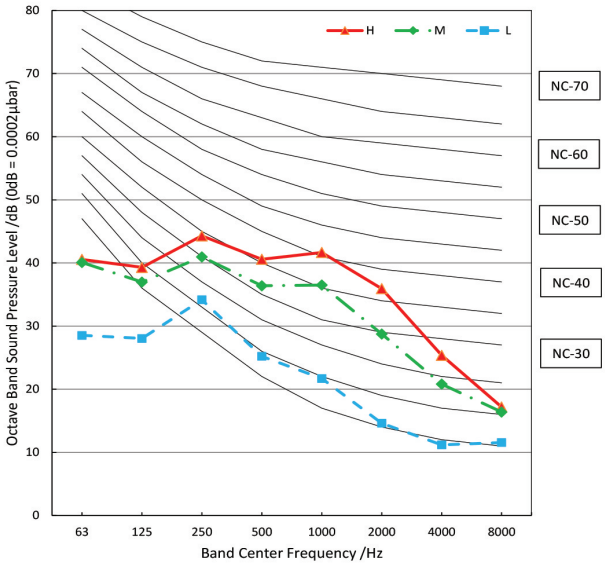
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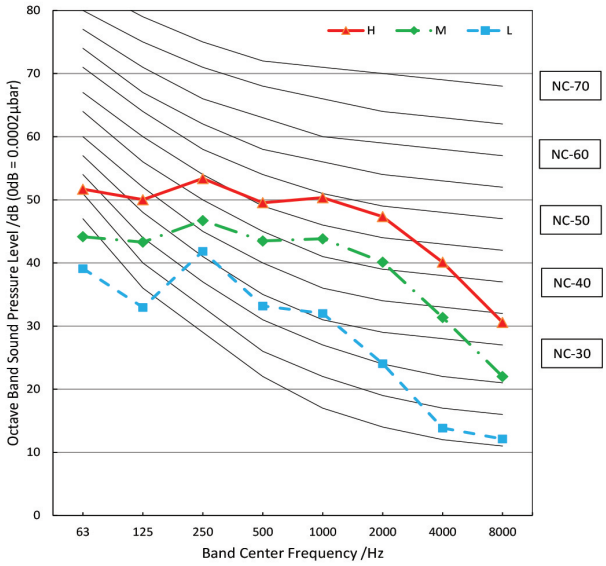
NDHAS26BB18-I



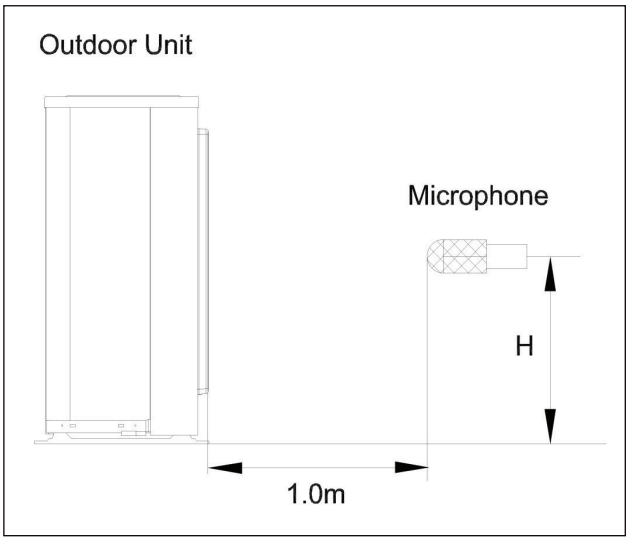
NDHAS26BB-24-I



NDHAS26BB-33-I



10.2. Unité extérieure

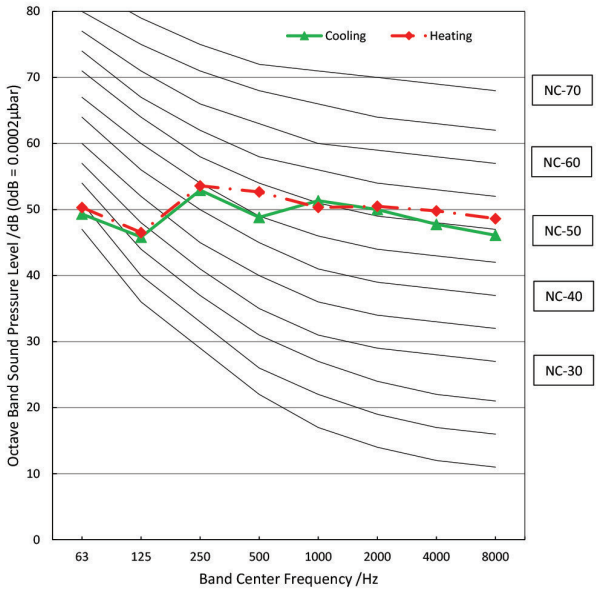


H = 0,5 × hauteur de l'unité extérieure

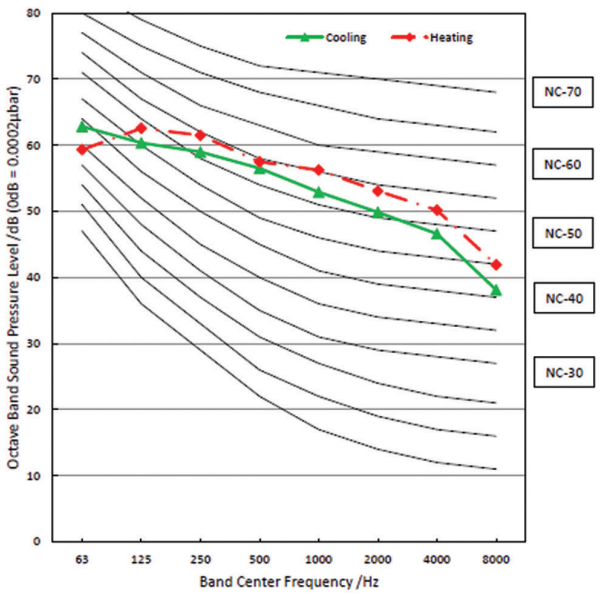
Remarques :

- Son mesuré à 1,0 m du centre de l'unité.
- Les données sont valides dans des conditions de champ libre
- Les données sont valides dans des conditions de fonctionnement nominales
- Pression acoustique de référence 0 dB = 20 µPa
- Le niveau sonore variera selon divers facteurs, tels que la construction (coefficient d'absorption acoustique) de la pièce particulière où l'équipement est installé.
- Les conditions de fonctionnement sont supposées être standards.

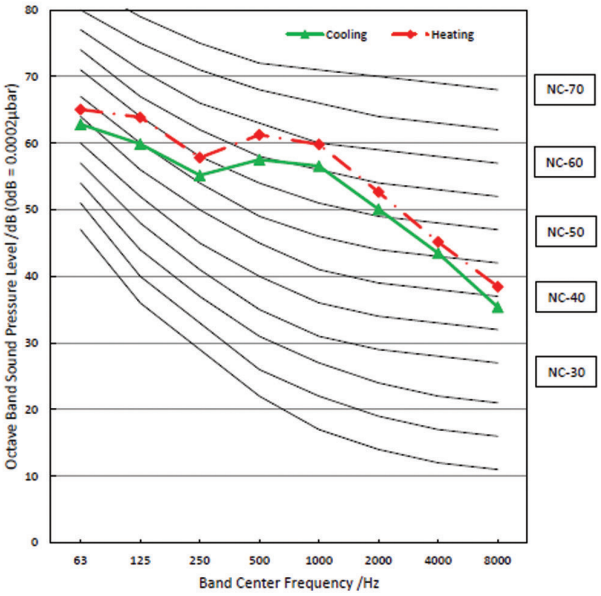
NDHAMBB-18-O



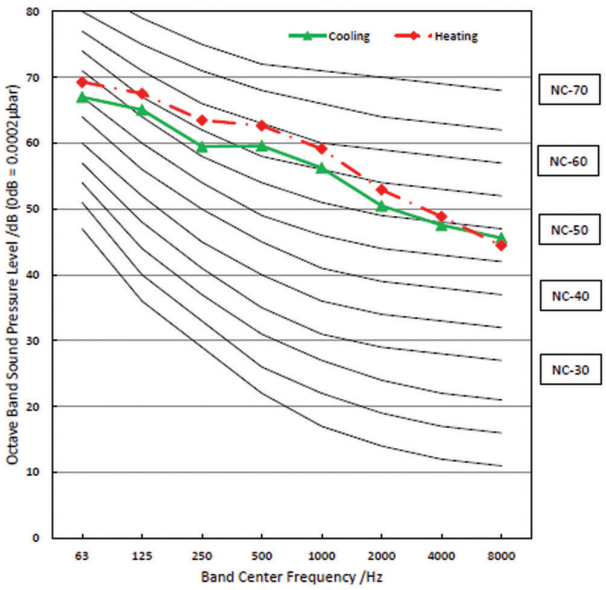
NDHAMBB-27-O



NDHAMBB-36-O



NDHAMBB-48-O





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