

Air-Conditioners

March 2019

TECHNICAL DATA BOOK R410A

Doc No. MD-1404-K050

Model name
<Indoor unit>

NAXAMT12A112AA

NAXAMT18A112AA

NAXAMT24A112AA

NAXAMT30A112AA

NAXAMT36A112AA

INDOOR UNIT SERVICE MANUAL

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INDOOR UNIT TECHNICAL DATA

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1-1. ALWAYS OBSERVE FOR SAFETY

Before obtaining access to terminal, all supply circuits must be disconnected.

1-2. CAUTIONS RELATED TO NEW REFRIGERANT

Cautions for units utilizing refrigerant R410A

Recommend using new refrigerant pipes.

In case of using the existing pipes for R22, recommend flushing the line using existing copper.

- Change flare nut to the one provided with this product. Use a newly flared pipe.
- Avoid using ASTM B280 Standard for copper and copper alloy seamless pipes and tube.

Make sure that the inside and outside of refrigerant piping is clean and it has no contamination such as sulfur hazardous for use, oxides, dirt, shaving particles, etc. In addition, use pipes with specified thickness.

Contamination inside refrigerant piping can cause deterioration of refrigerant oil etc.

Store the piping to be used indoors during installation and both ends of the piping sealed until just before brazing. (Leave elbow joints, etc. in their packaging.)

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Use ester oil, ether oil or alkylbenzene oil (small amount) as the refrigerant oil applied to flares and flange connections.

If large amount of mineral oil enters, that can cause deterioration of refrigerant oil etc.

Charge refrigerant from liquid phase of gas cylinder.

If the refrigerant is charged from gas phase, composition change may occur in refrigerant and the efficiency will be lowered.

Do not use refrigerant other than R410A.

If other refrigerant (R22 etc.) is used, chlorine in refrigerant can cause deterioration of refrigerant oil etc.

Use a vacuum pump with a reverse flow check valve.

Vacuum pump oil may flow back into refrigerant cycle and that can cause deterioration of refrigerant oil etc.

Use the following tools specifically designed for use with R410A refrigerant.

The following tools are necessary to use R410A refrigerant.

Tools for R410A	
Gauge manifold	Flare tool
Charge hose	Size adjustment gauge
Gas leak detector	Vacuum pump adaptor
Torque wrench	Electronic refrigerant charging scale

Handle tools with care.

If dirt, dust or moisture enters into refrigerant cycle, that can cause deterioration of refrigerant oil or malfunction of compressor.

Ventilate the room if refrigerant leaks during operation. If refrigerant comes into contact with a flame, poisonous gases will be released.

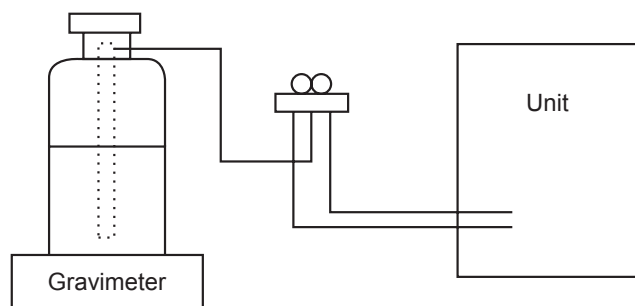
[1] Cautions for service

1. Perform service after recovering the refrigerant left in unit completely.
2. Do not release refrigerant in the air.
3. After completing service, charge the cycle with specified amount of refrigerant.
4. When performing service, install a filter drier simultaneously. Be sure to use a filter drier for new refrigerant.

[2] Additional refrigerant charge

When charging directly from cylinder

- Check that cylinder for R410A on the market is syphon type.
- Charging should be performed with the cylinder of syphon stood vertically. (Refrigerant is charged from liquid phase.)



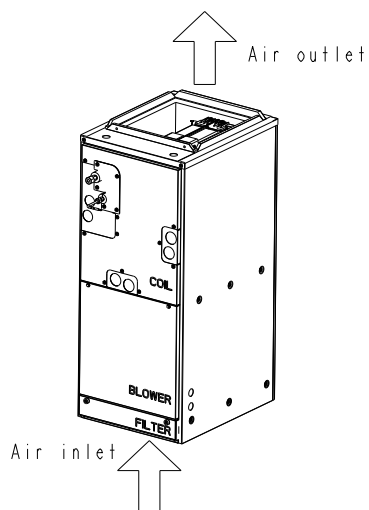
[3] Service tools

Use the below service tools as exclusive tools for R410A refrigerant.

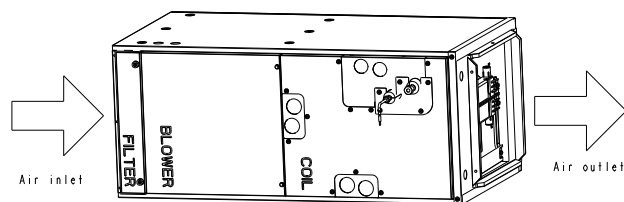
No.	Tool name	Specifications
①	Gauge manifold	Specifications • Only for R410A • Use the existing fitting specifications. (UNF1/2) • Use high-tension side pressure of 5.3MPa·G or over.
②	Charge hose	• Only for R410A • Use pressure performance of 5.09MPa·G or over.
③	Electronic scale	-
④	Gas leak detector	• Use the detector for R134a, R407C or R410A.
⑤	Adaptor for reverse flow check	• Attach on vacuum pump.
⑥	Refrigerant charge base	-
⑦	Refrigerant cylinder	• Only for R410A • Top of cylinder (Pink) • Cylinder with syphon
⑧	Refrigerant recovery equipment	-

- Indoor Unit

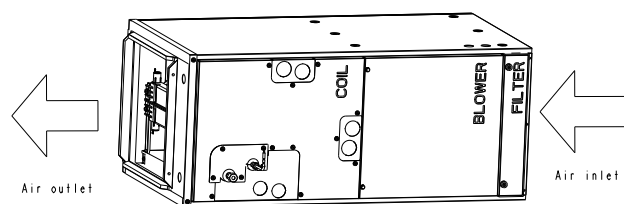
(1) Vertical



(2) Horizontal Right



(3) Horizontal Left



NOTE

For downflow installations, please see downflow kit manuals.

INDOOR UNIT	Service Ref.			N*XAMT12A112AA
	Power supply (phase, cycle, voltage)			1 phase, 60Hz, 208/230V
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	3.00	
	External finish			Black galvanized steel cabinet
	Heat exchanger			Plate fin coil
	Fan	Fan (drive) x No.		Sirocco fan x 1
		Fan motor output	kW	0.100
		Fan motor	F.L.A	2.4
		Airflow (Low-Mid-High)	m³/min (CFM)	7.9-10.8-12.7 (278-381-448)
		External static pressure	Pa (in.WG)	75-125-200 (0.30-0.50-0.80)
	Operation control & Thermostat			Remote controller & built-in
	Sound pressure level (Low-Mid-High)	125Pa (0.50 in.WG)	dB(A)	29-36-39
	Drain pipe		mm (in.)	19.05 (3/4) FPT
	Dimensions	W	mm (in.)	432 (17)
		D	mm (in.)	548 (21-5/8)
H		mm (in.)	1011 (39-13/16)	
Weight			42 (93)	

INDOOR UNIT

Service Ref.			N*XAMT18A112AA
Power supply (phase, cycle, voltage)			1 phase, 60Hz, 208/230V
	Max. Fuse Size	A	15
	Min. Circuit Ampacity	A	3.00
External finish			Black galvanized steel cabinet
Heat exchanger			Plate fin coil
Fan	Fan (drive) x No.		Sirocco fan x 1
	Fan motor output	kW	0.160
	Fan motor	F.L.A	2.4
	Airflow (Low-Mid-High)	m³/min (CFM)	13.3-16.2-19.1 (471-573-675)
	External static pressure	Pa (in.WG)	75-125-200 (0.30-0.50-0.80)
Operation control & Thermostat			Remote controller & built-in
Sound pressure level (Low-Mid-High)	125Pa (0.50 in.WG)	dB (A)	33-36-41
Drain pipe		mm (in.)	19.05 (3/4) FPT
Dimensions	W	mm (in.)	432 (17)
	D	mm (in.)	548 (21-5/8)
	H	mm (in.)	1011 (39-13/16)
Weight		kg (lbs)	42 (93)

INDOOR UNIT

Service Ref.			N*XAMT24A112AA	
Power supply (phase, cycle, voltage)			1 phase, 60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	3.00	
External finish			Black galvanized steel cabinet	
Heat exchanger			Plate fin coil	
Fan	Fan (drive) x No.		Sirocco fan x 1	
	Fan motor output		kW	
	Fan motor		F.L.A	
	Airflow (Low-Mid-High)		m³/min (CFM)	
	External static pressure		Pa (in.WG)	
Operation control & Thermostat			Remote controller & built-in	
Sound pressure level (Low-Mid-High)		125Pa (0.50 in.WG)	dB(A)	33-36-41
Drain pipe		mm (in.)	19.05 (3/4) FPT	
Dimensions	W	mm (in.)	432 (17)	
	D	mm (in.)	548 (21-5/8)	
	H	mm (in.)	1011 (39-13/16)	
Weight		kg (lbs)	42 (93)	

INDOOR UNIT

Service Ref.			N*XAMT30A112AA	
Power supply (phase, cycle, voltage)			1 phase, 60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	4.13	
External finish			Black galvanized steel cabinet	
Heat exchanger			Plate fin coil	
Fan	Fan (drive) x No.		Sirocco fan x 1	
	Fan motor output		kW	
	Fan motor		F.LA	
	Airflow (Low-Mid-High)		m³/min (CFM)	
	External static pressure		Pa (in.WG)	
Operation control & Thermostat			Remote controller & built-in	
Sound pressure level (Low-Mid-High)		125Pa (0.50 in.WG)	dB(A)	32-37-41
Drain pipe		mm (in.)	19.05 (3/4) FPT	
Dimensions	W	mm (in.)	534 (21)	
	D	mm (in.)	548 (21-5/8)	
	H	mm (in.)	1113.8 (43-7/8)	
Weight		kg (lbs)	54 (119)	

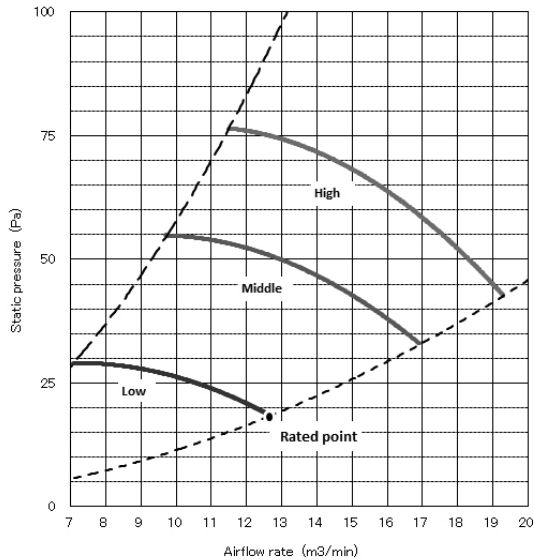
INDOOR UNIT

Service Ref.			N*XAMT36A112AA	
Power supply (phase, cycle, voltage)			1 phase, 60Hz, 208/230V	
	Max. Fuse Size	A	15	
	Min. Circuit Ampacity	A	4.13	
External finish			Black galvanized steel cabinet	
Heat exchanger			Plate fin coil	
Fan	Fan (drive) x No.		Sirocco fan x 1	
	Fan motor output		kW	
	Fan motor		F.L.A	
	Airflow (Low-Mid-High)		m³/min (CFM)	
	External static pressure		Pa (in.WG)	
Operation control & Thermostat			Remote controller & built-in	
Sound pressure level (Low-Mid-High)		125Pa (0.50 in.WG)	dB(A)	35-40-42
Drain pipe		mm (in.)	19.05 (3/4) FPT	
Dimensions	W	mm (in.)	534 (21)	
	D	mm (in.)	548 (21-5/8)	
	H	mm (in.)	1113.8 (43-7/8)	
Weight		kg (lbs)	54 (119)	

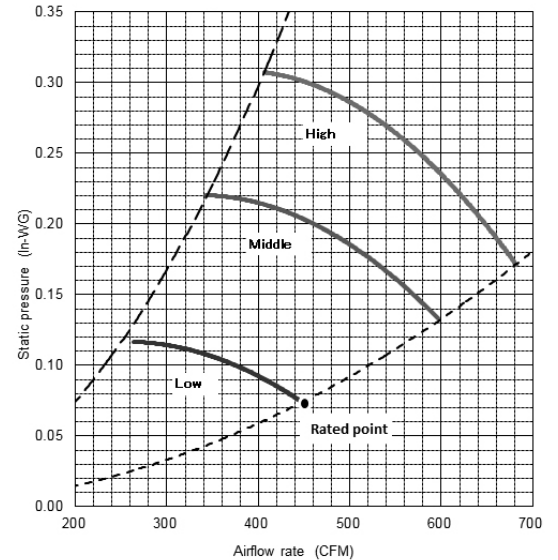
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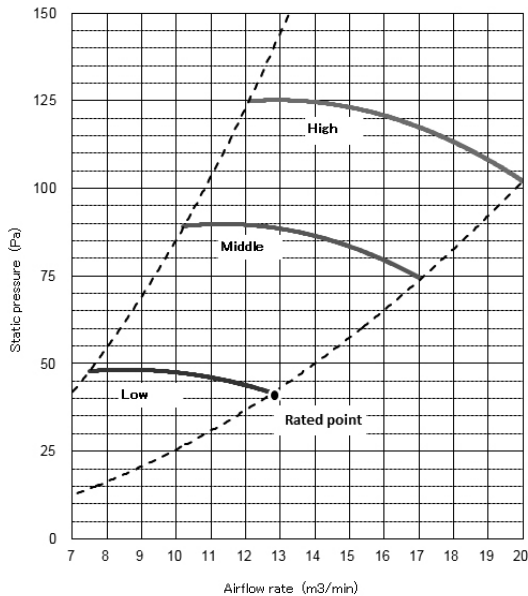
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position External static pressure: 75Pa,
0.30 [in.WG] Power source: 208, 230 60Hz



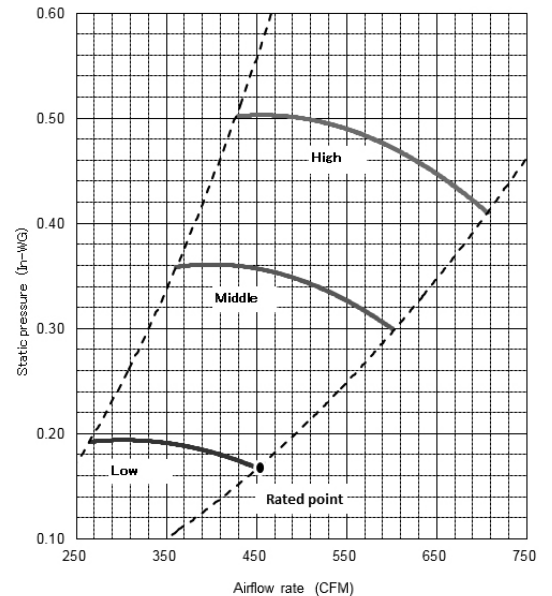
N*XAMT12A112AA exclude downflow
position External static pressure: 75Pa,
0.30 [in.WG] Power source: 208, 230 60Hz

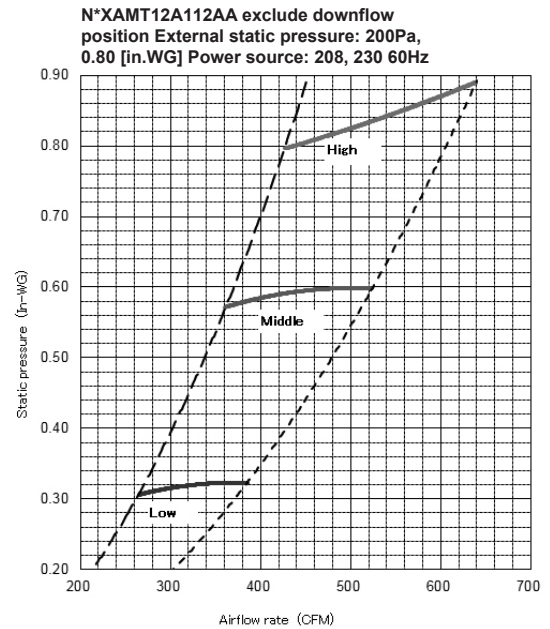
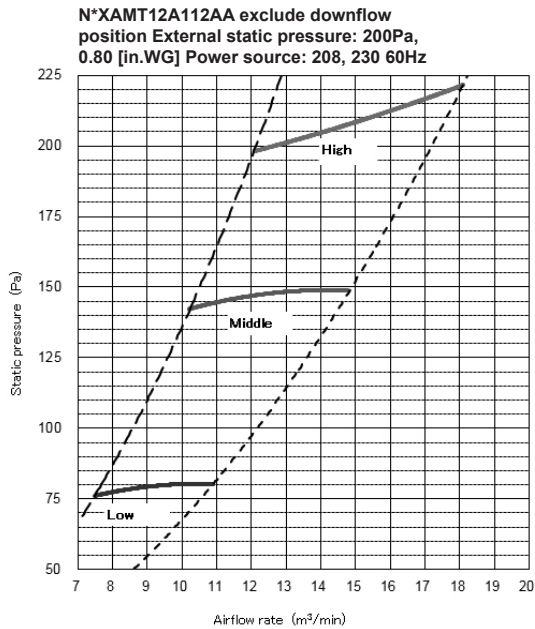


N*XAMT12A112AA exclude downflow
position External static pressure: 125Pa,
0.30 [in.WG] Power source: 208, 230 60Hz



N*XAMT12A112AA exclude downflow
position External static pressure: 125Pa,
0.30 [in.WG] Power source: 208, 230 60Hz





*. 200 Pa (0.80 in WG) does not have "Rated point".

*. 200 Pa (0.80 in WG) does not have "Rat

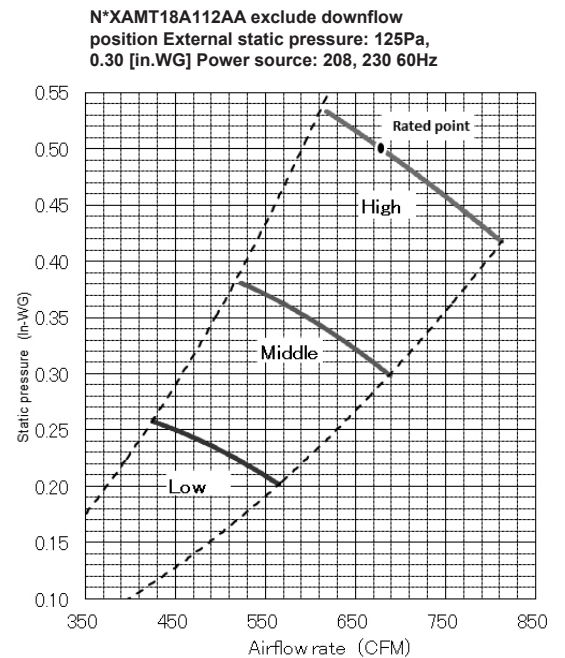
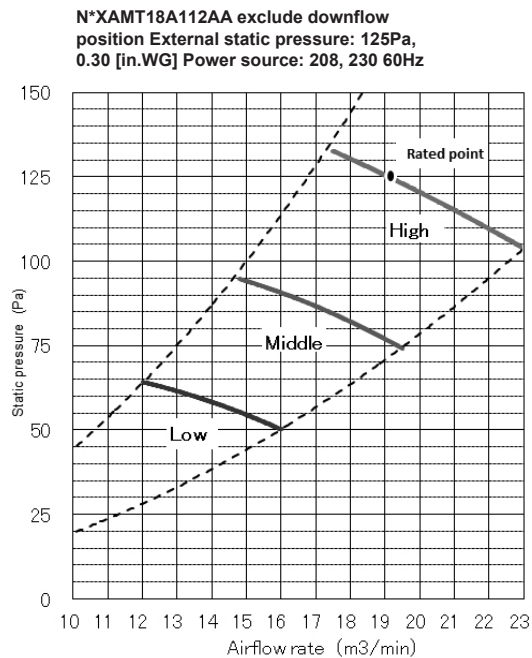
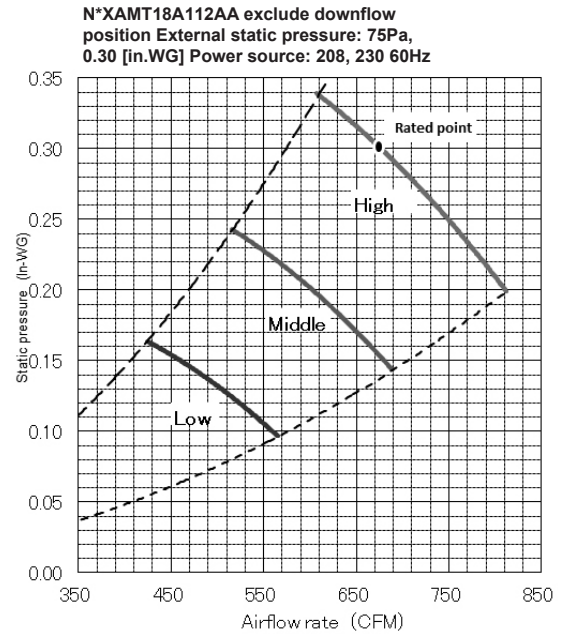
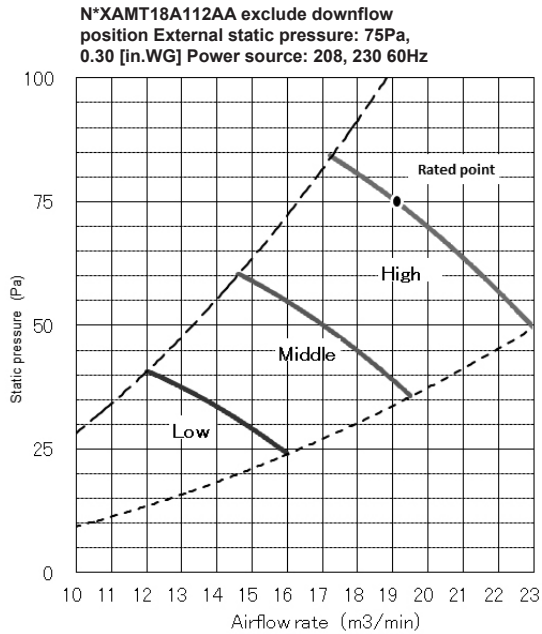


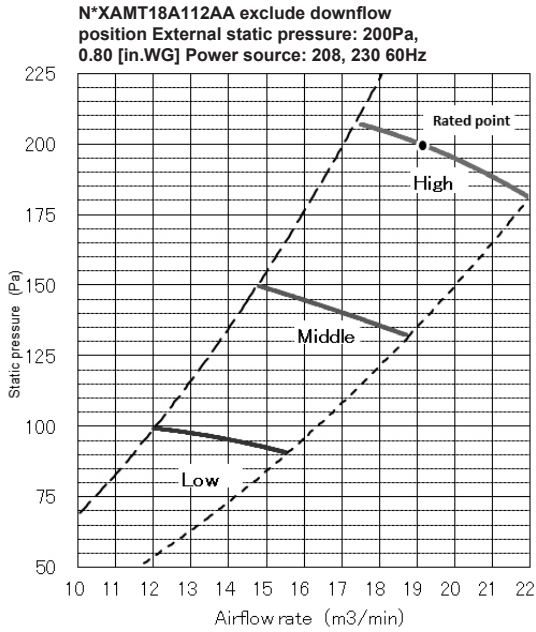
NOTE

For downflow installations, please see downflow kit manuals.

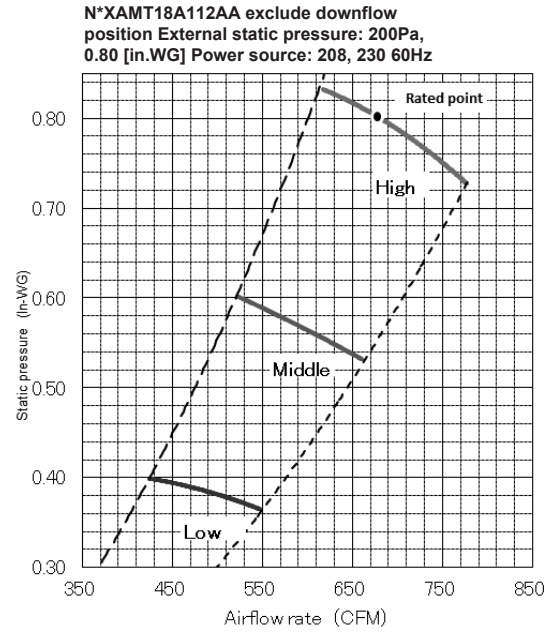
N*XAMT18A112AA

- Vertical, Horizontal Right, Horizontal Left





*. 200 Pa (0.80 in WG) does not have "Rated point".



*. 200 Pa (0.80 in WG) does not have "Rated point".

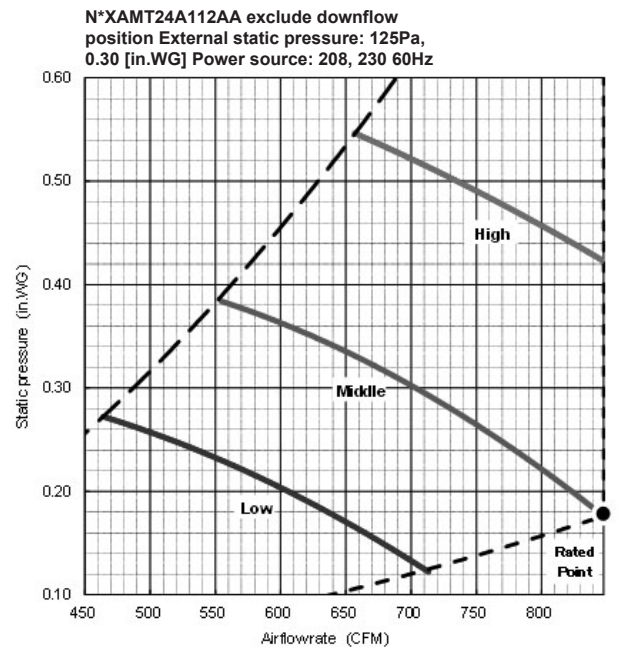
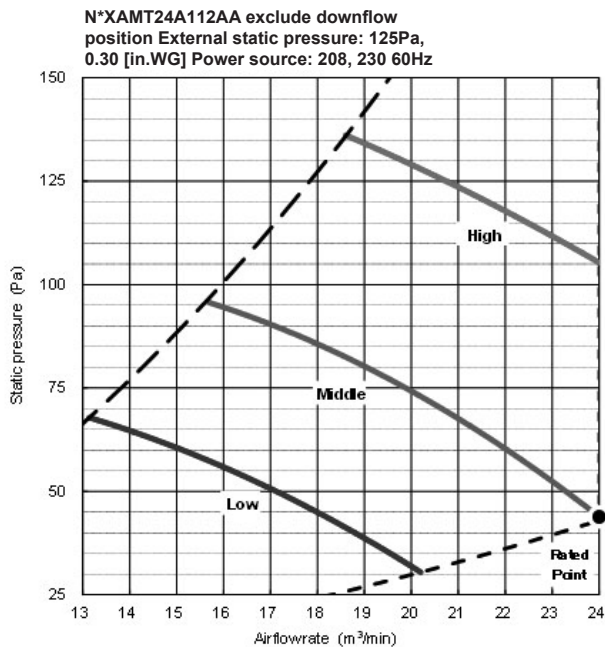
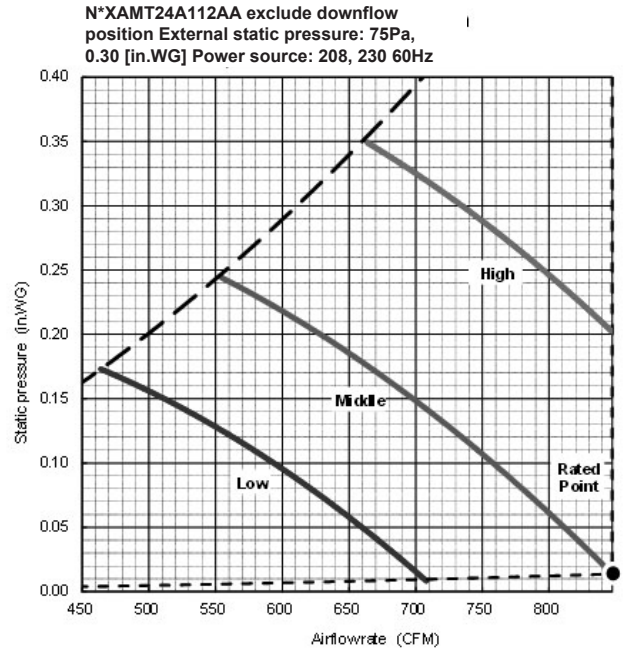
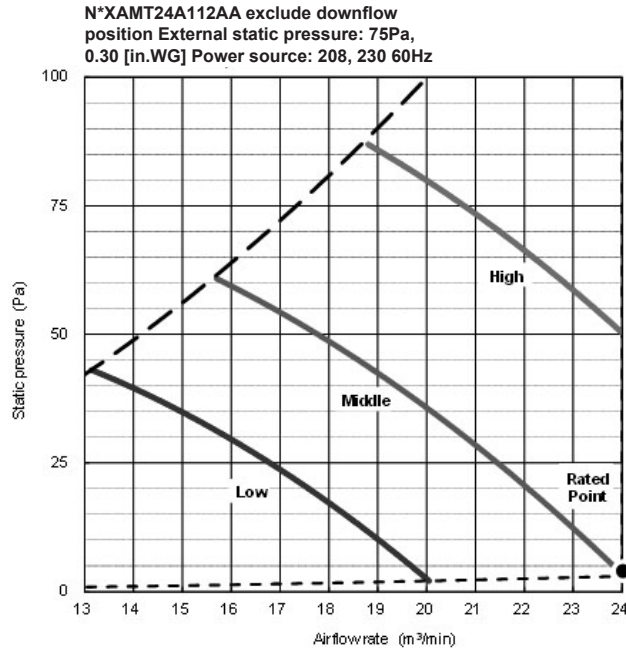


NOTE

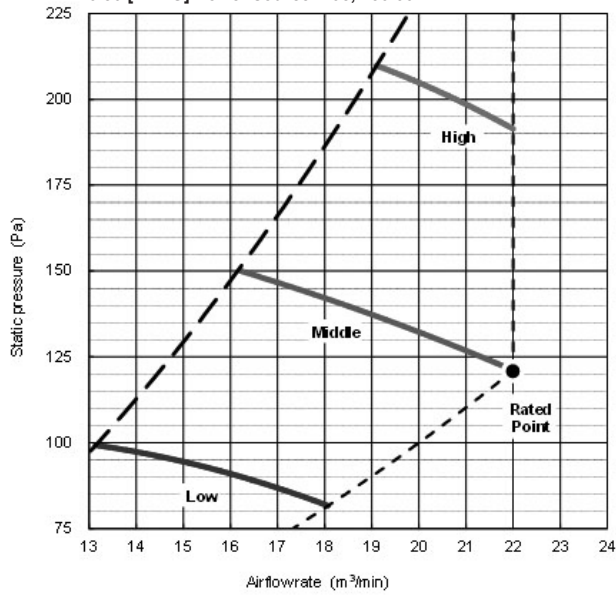
For downflow installations, please see downflow kit manuals.

N*XAMT24A112AA

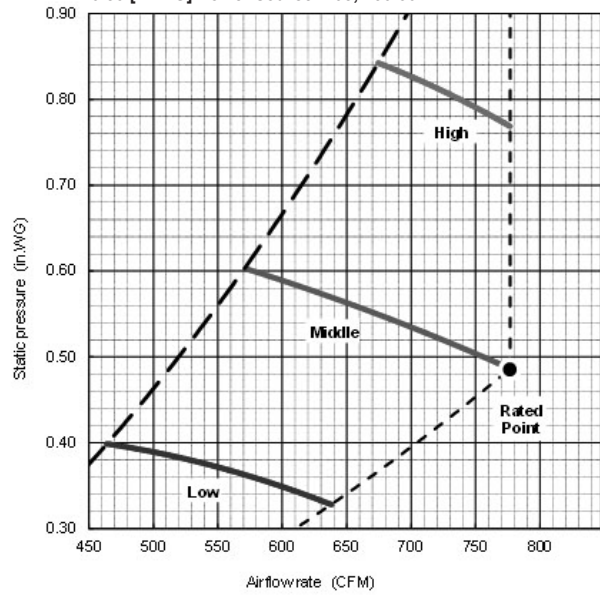
- Vertical, Horizontal Right, Horizontal Left



N*XAMT24A112AA exclude downflow
position External static pressure: 200Pa,
0.80 [in.WG] Power source: 208, 230 60Hz



N*XAMT24A112AA exclude downflow
position External static pressure: 200Pa,
0.80 [in.WG] Power source: 208, 230 60Hz

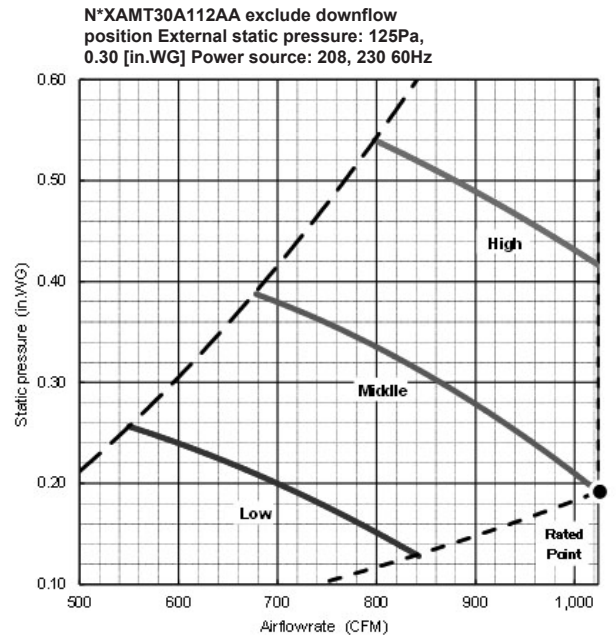
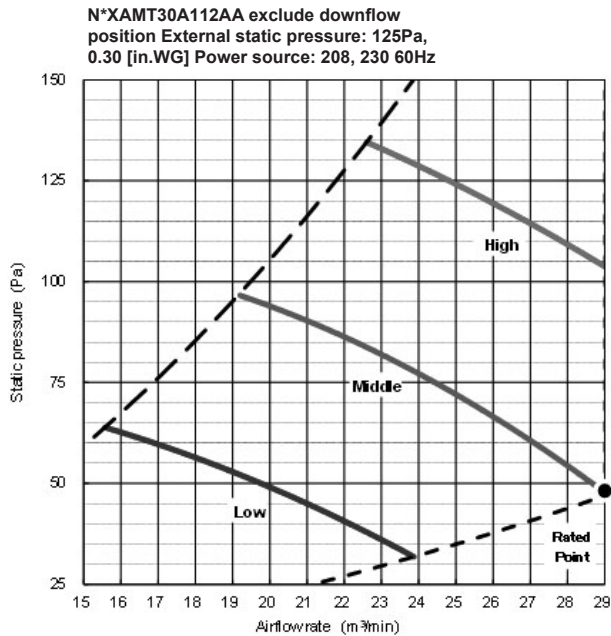
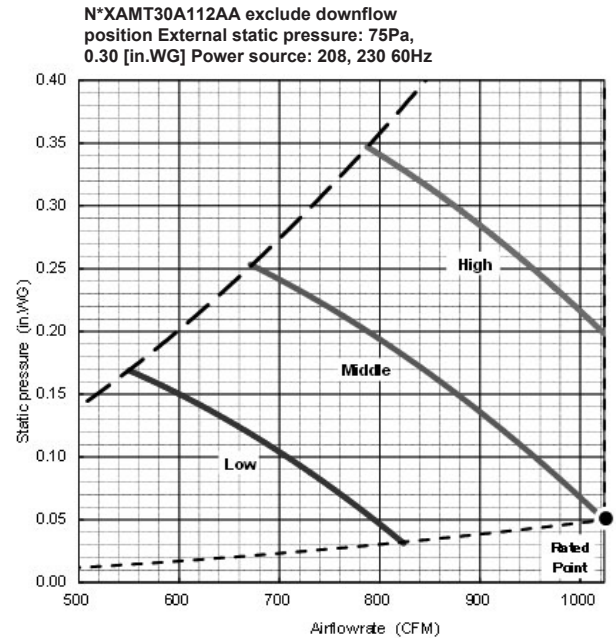
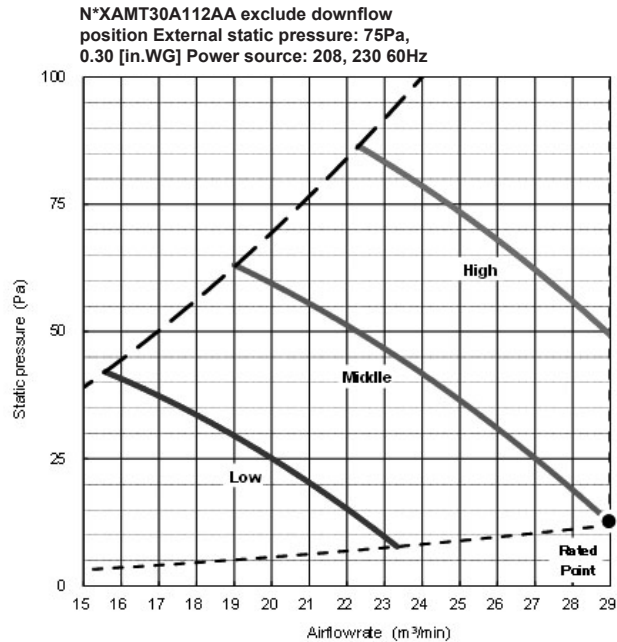


NOTE

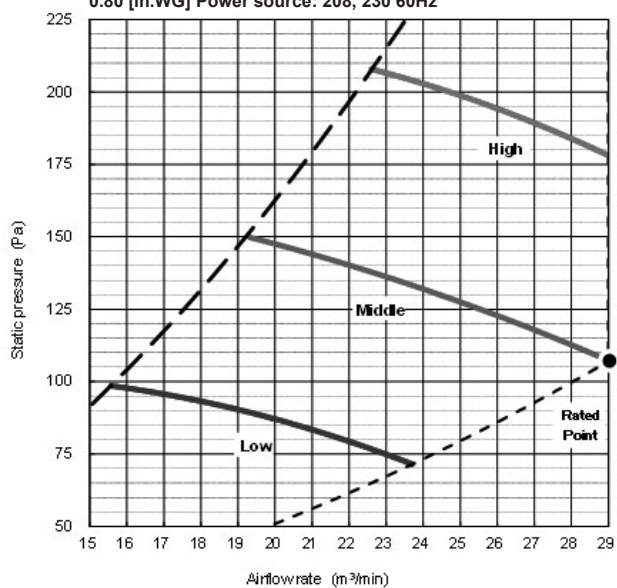
For downflow installations, please see downflow kit manuals.

N*XAMT30A112AA

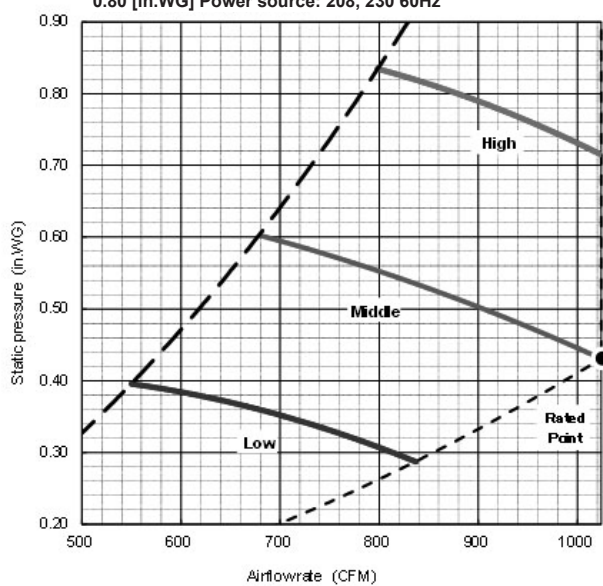
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N*XAMT30A112AA exclude downflow
position External static pressure: 200Pa,
0.80 [in.WG] Power source: 208, 230 60Hz



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position External static pressure: 200Pa,
0.80 [in.WG] Power source: 208, 230 60Hz

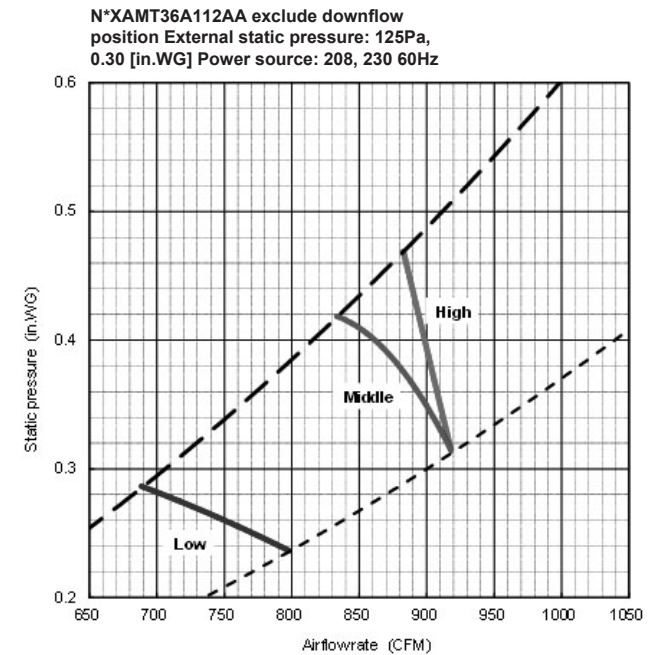
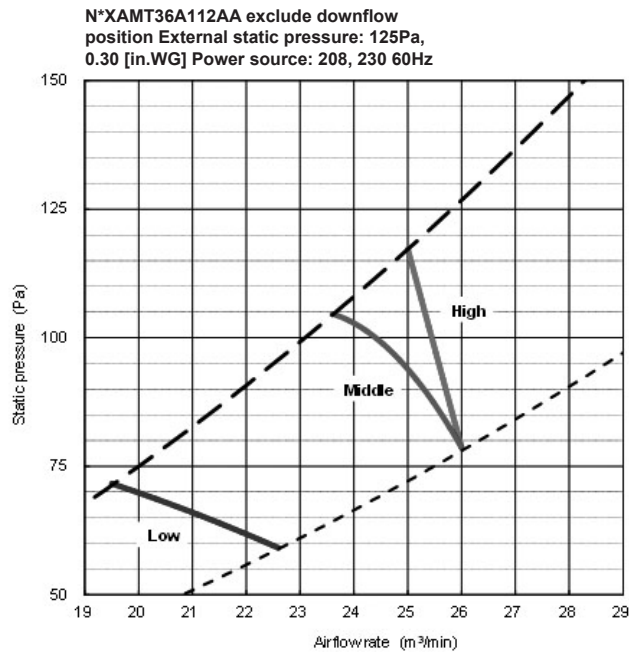
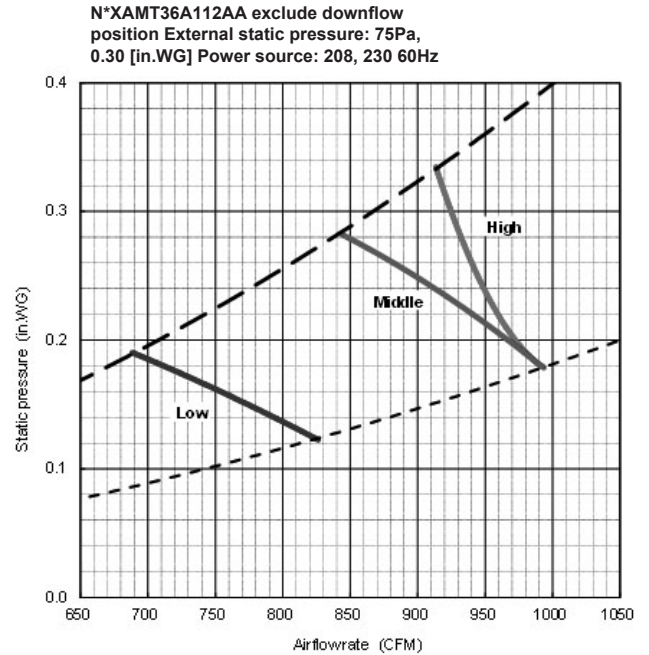
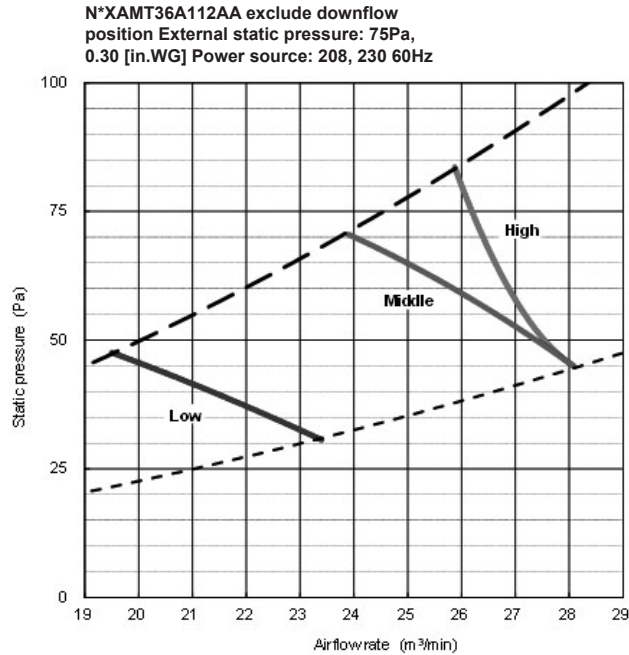


NOTE

For downflow installations, please see downflow kit manuals.

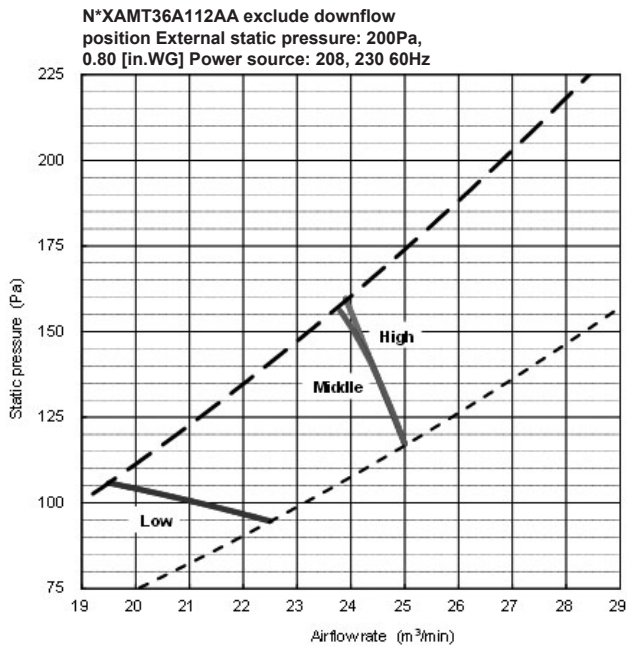
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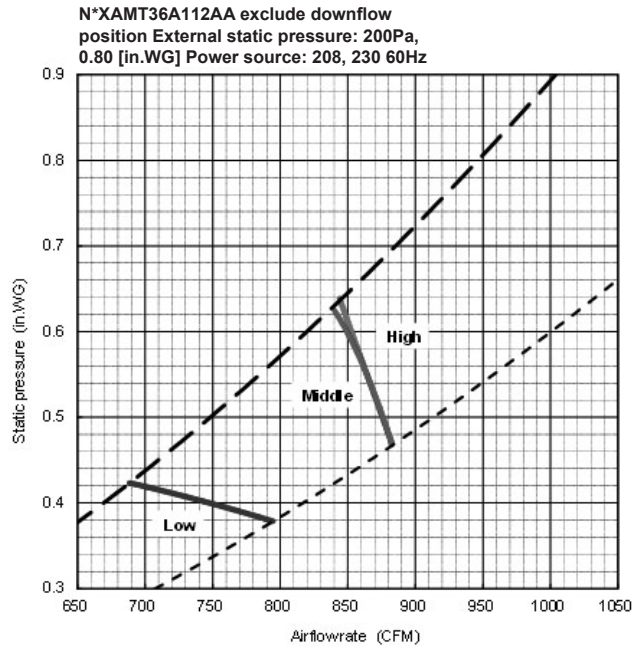


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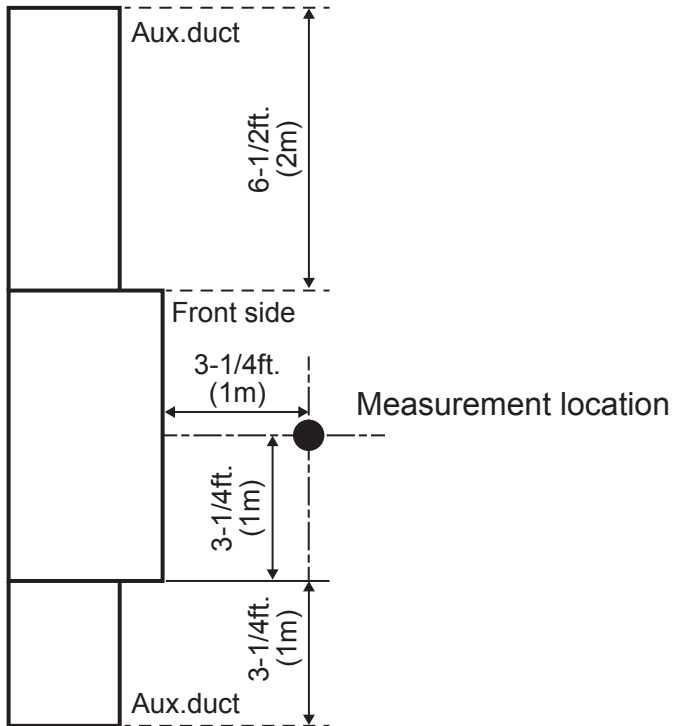


NOTE

For downflow installations, please see downflow kit manuals.

5-1. Sound pressure level

Multi-Position

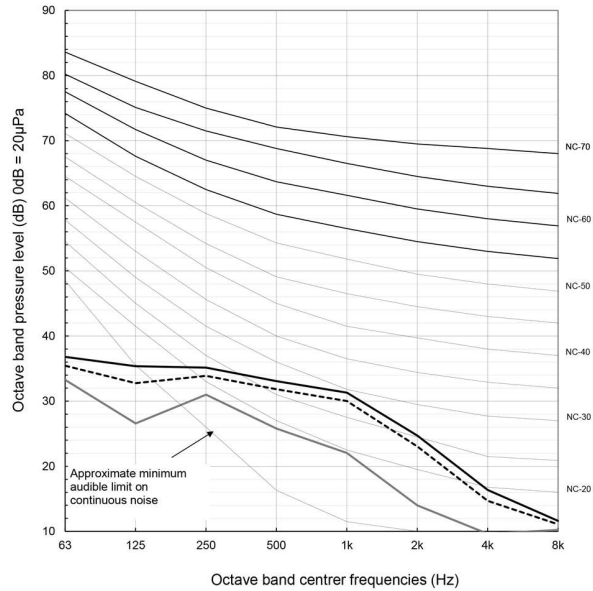


5-2. NC Curves

N*XAMT12A112AA

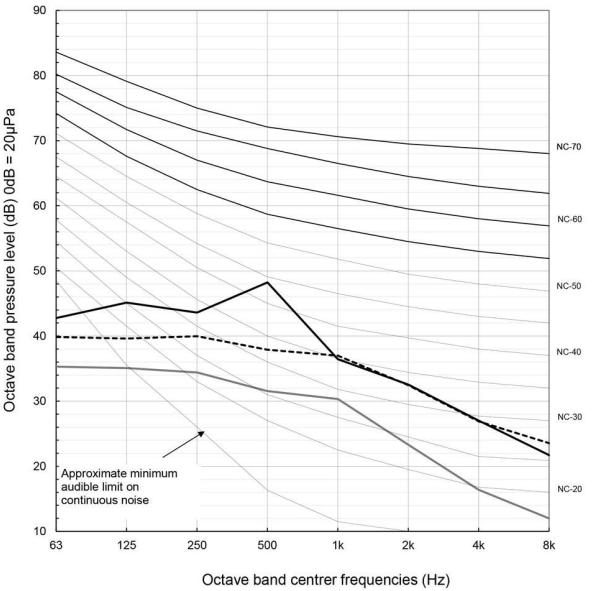
Condition	Acale	LINE
High	36	—
Middle	34	- -
Low	28	---
-	-	---

External Static Pressure : 0.3inWG. (75Pa)



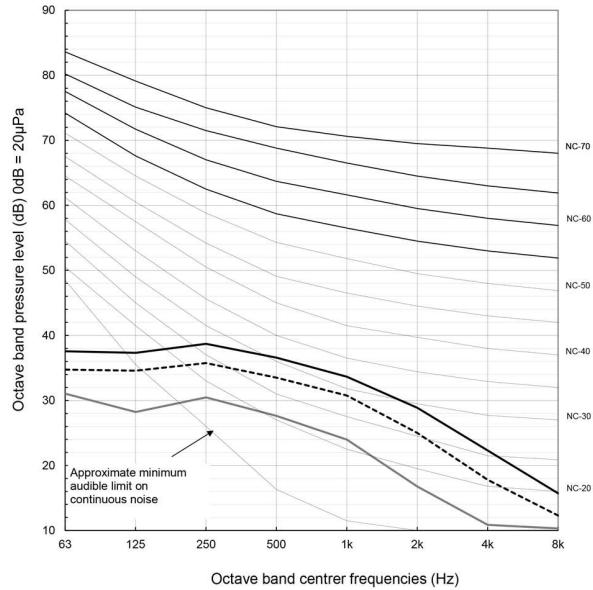
Condition	Acale	LINE
High	47	—
Middle	42	- -
Low	35	---
-	-	---

External Static Pressure : 0.8inWG. (200Pa)



Condition	Acale	LINE
High	39	—
Middle	36	- -
Low	29	---
-	-	---

External Static Pressure : 0.5inWG. (125Pa)

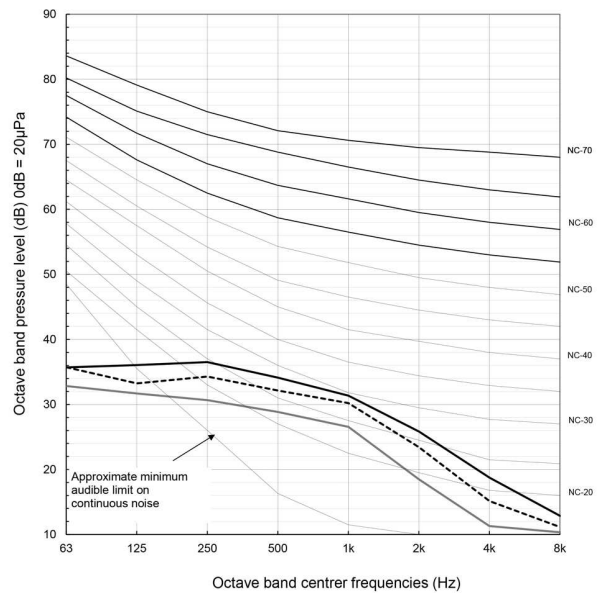


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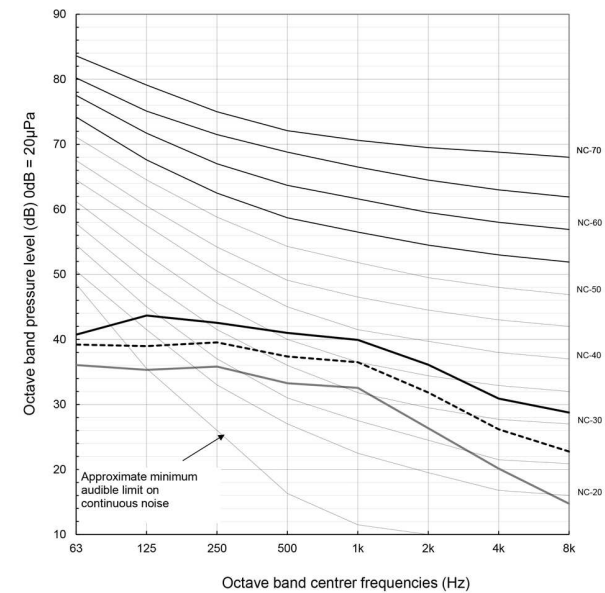
Condition	Acale	LINE
High	36	---
Middle	35	- - -
Low	31	----
-	-	----

External Static Pressure : 0.3inWG. (75Pa)



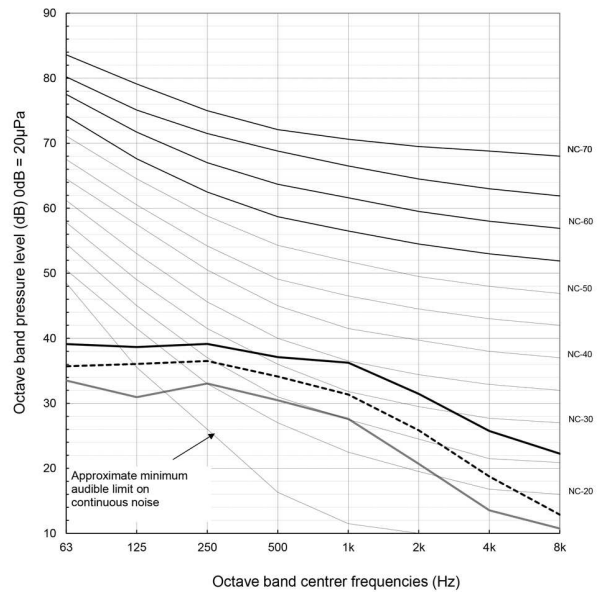
Condition	Acale	LINE
High	45	---
Middle	41	- - -
Low	37	----
-	-	----

External Static Pressure : 0.8inWG. (200Pa)



Condition	Acale	LINE
High	41	---
Middle	36	- - -
Low	33	----
-	-	----

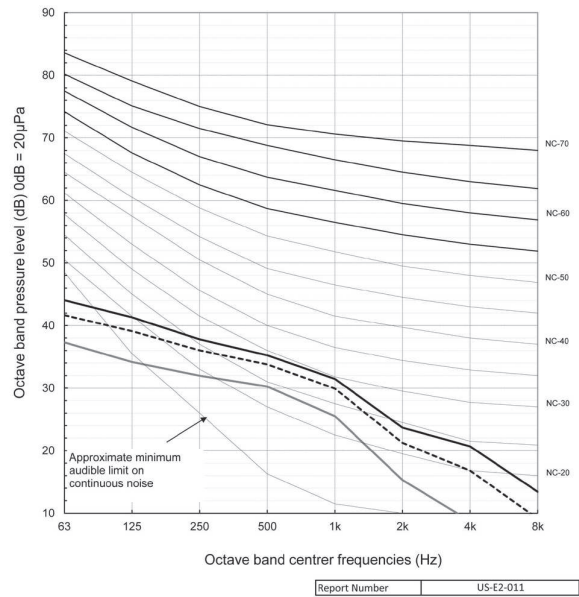
External Static Pressure : 0.5inWG. (125Pa)



N*XAMT24A112AA

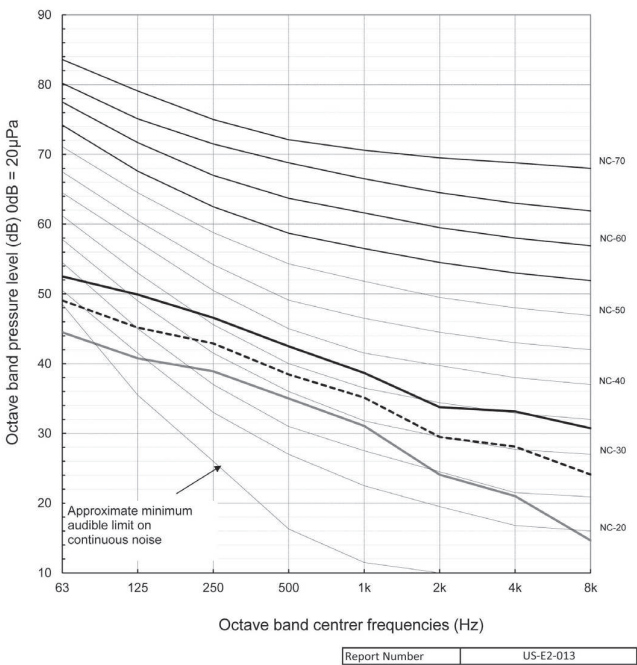
Condition	Acale	LINE
High	37	---
Middle	35	- - -
Low	31	----
-	-	----

External Static Pressure : 0.3inWG. (75Pa)



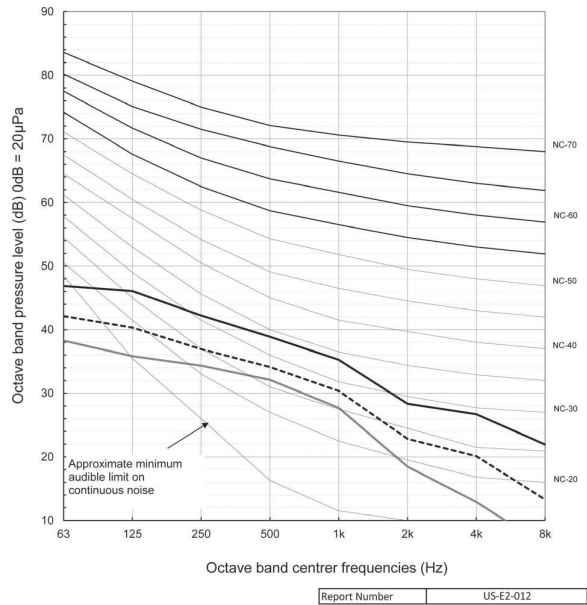
Condition	Acale	LINE
High	45	---
Middle	41	- - -
Low	37	----
-	-	----

External Static Pressure : 0.8inWG. (200Pa)



Condition	Acale	LINE
High	41	---
Middle	36	- - -
Low	33	----
-	-	----

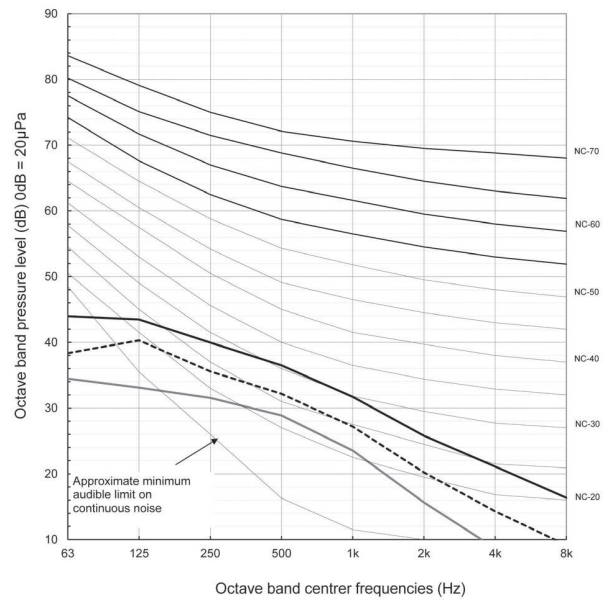
External Static Pressure : 0.5inWG. (125Pa)



N*XAMT30A112AA

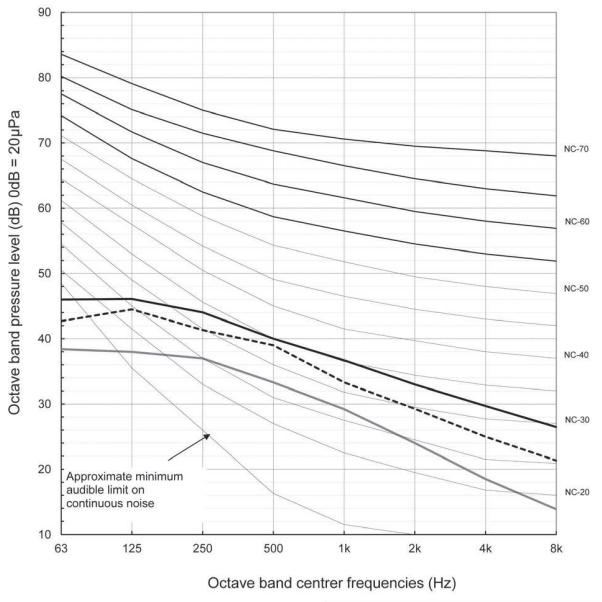
Condition	Acale	LINE
High	38	---
Middle	34	- - -
Low	30	----
-	-	- - -

External Static Pressure : 0.3inWG. (75Pa)



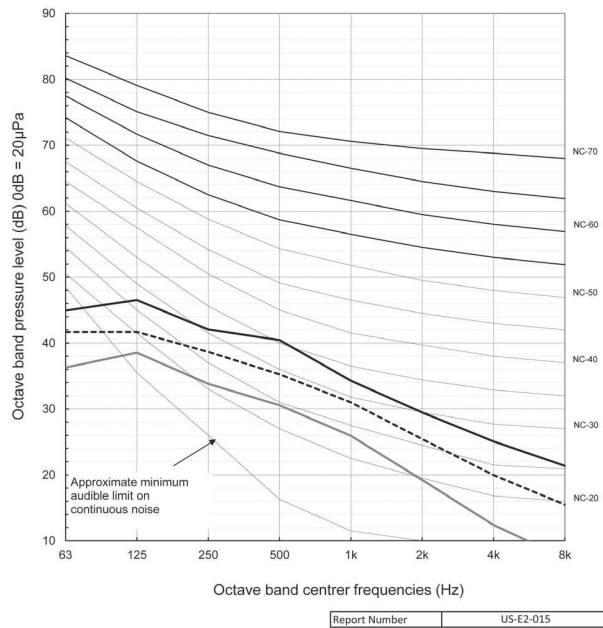
Condition	Acale	LINE
High	43	---
Middle	40	- - -
Low	35	----
-	-	- - -

External Static Pressure : 0.8inWG. (200Pa)



Condition	Acale	LINE
High	41	---
Middle	37	- - -
Low	32	----
-	-	- - -

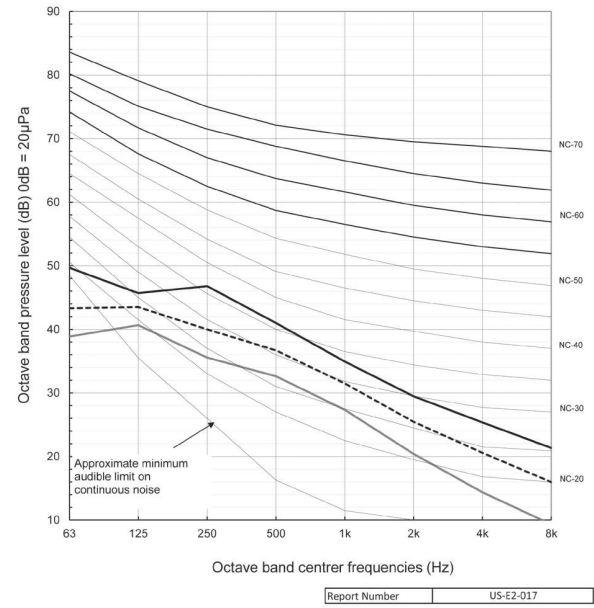
External Static Pressure : 0.5inWG. (125Pa)



N*XAMT36A112AA

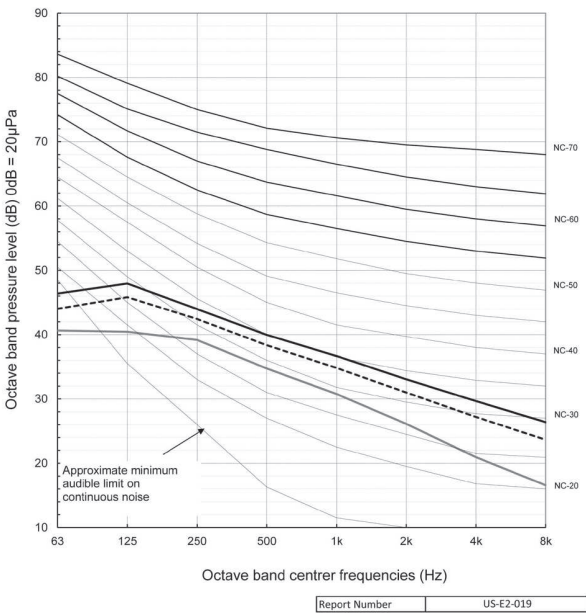
Condition	Scale	LINE
High	43	---
Middle	38	- - -
Low	34	----
-	-	----

External Static Pressure : 0.3inWG. (75Pa)



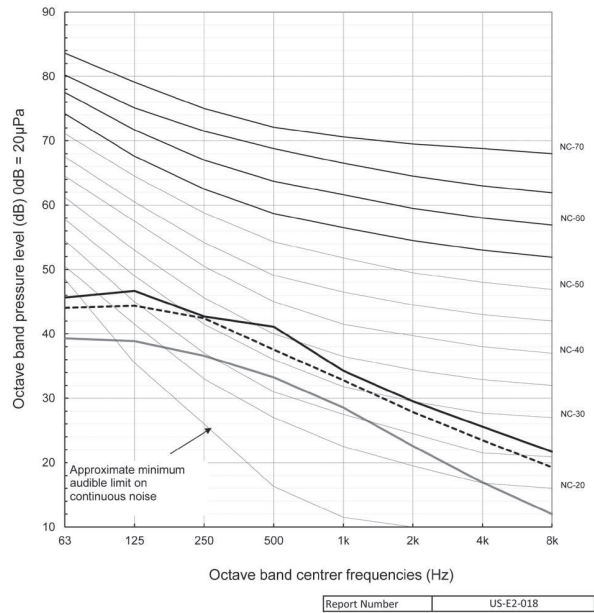
Condition	Scale	LINE
High	43	---
Middle	41	- - -
Low	37	----
-	-	----

External Static Pressure : 0.8inWG. (200Pa)



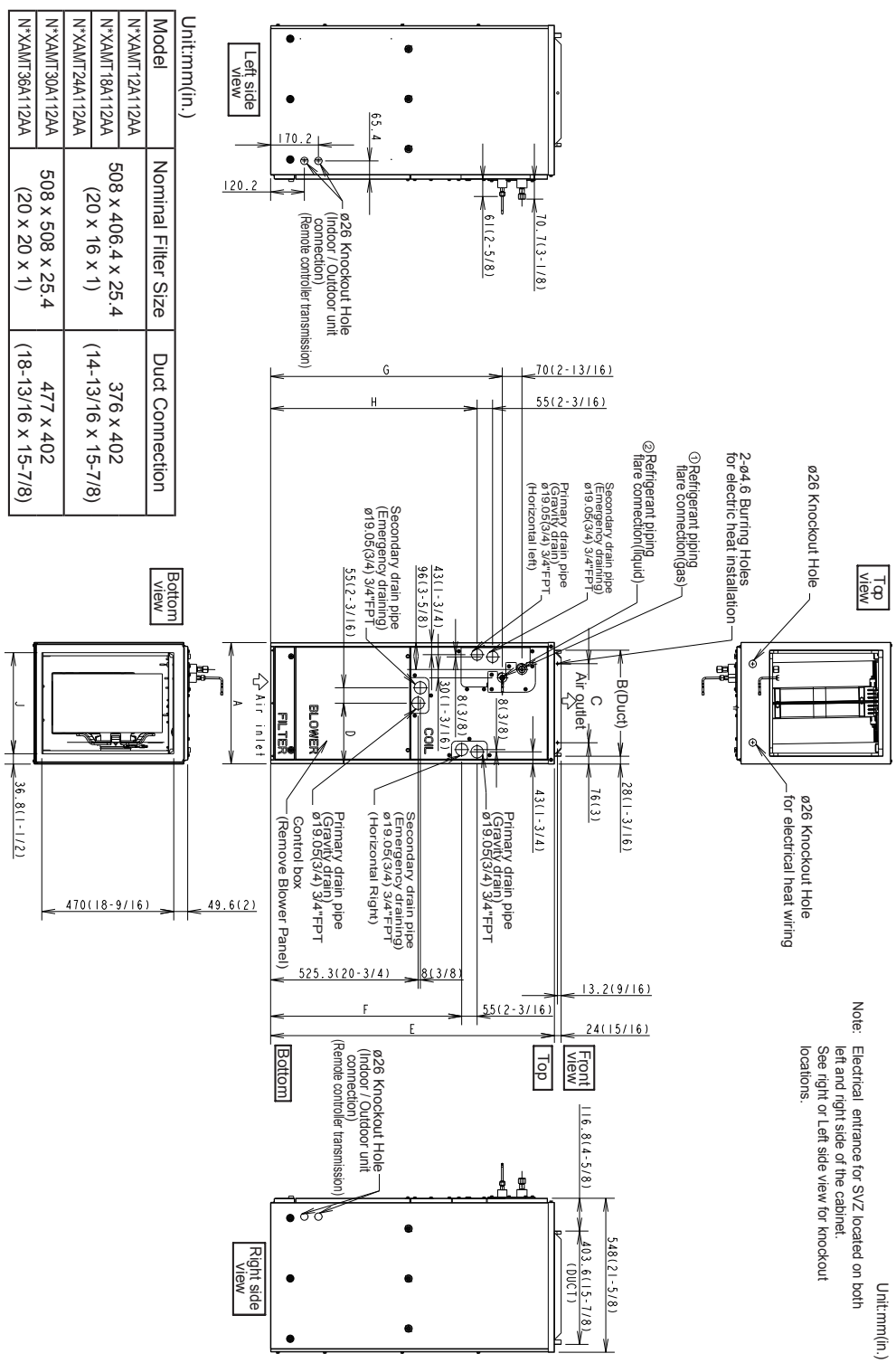
Condition	Scale	LINE
High	42	---
Middle	40	- - -
Low	35	----
-	-	----

External Static Pressure : 0.5inWG. (125Pa)

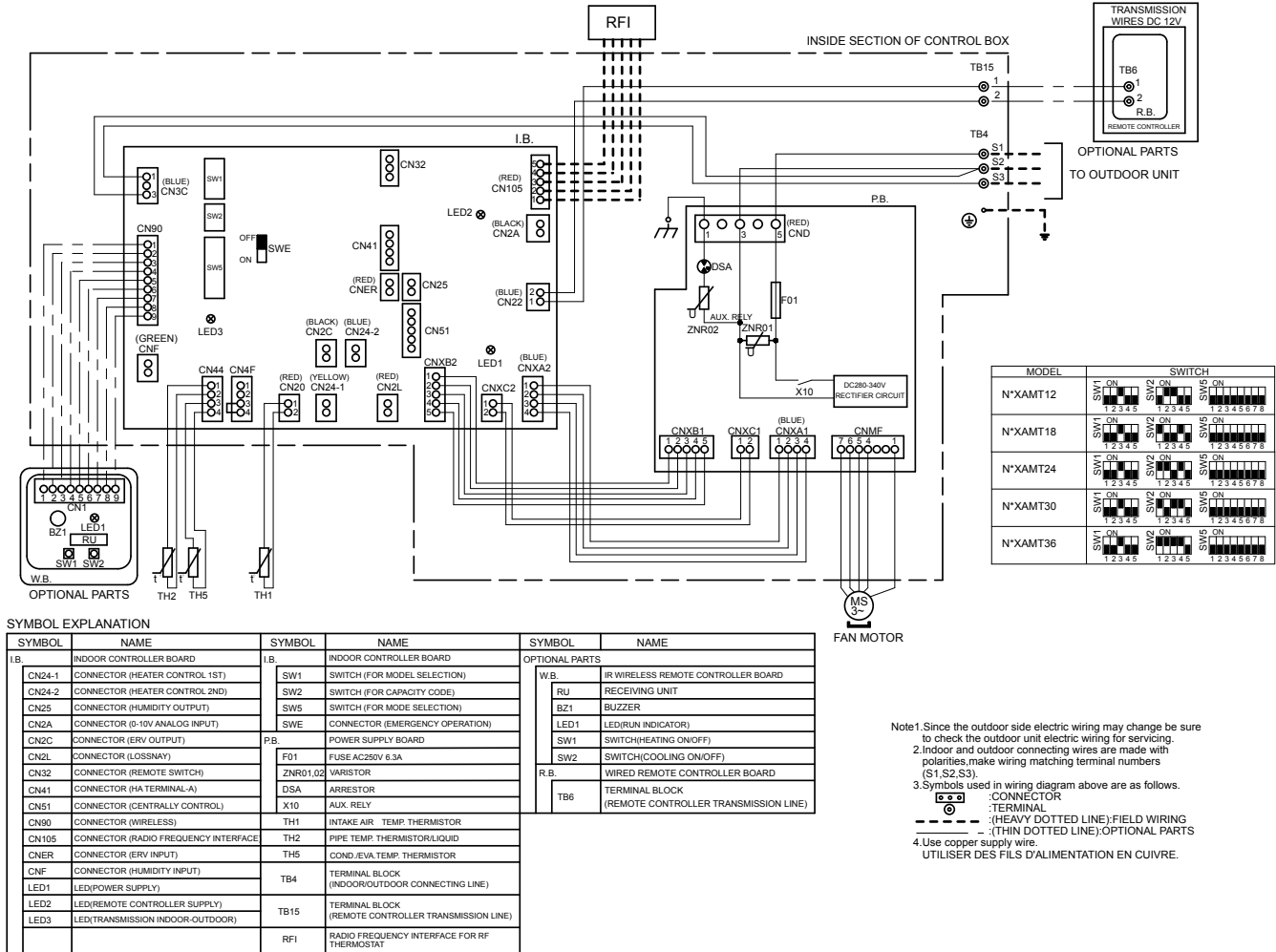


N*XAMT12A112AA N*XAMT18A112AA N*XAMT24A112AA
N*XAMT30A112AA N*XAMT36A112AA

Model	A	B	C	D	E	F	G	H	J	Gas Pipe	Liquid pipe
N°XAMT 12A1 12AA	432 (17)	376 (14-13/16)	281 (11-1/8)	224 (8-7/8)	1,010.8 (39-13/16)	680 (26-13/16)	823 (32-7/16)	735.5 (29)	360 (14-3/16)	ø 9.52 (3/8)	ø 6.35 (1/4)
N°XAMT 18A1 12AA										ø 12.7 (1/2)	
N°XAMT 24A1 12AA											
N°XAMT 30A1 12AA	534	477	382.6	266.5	1,113.8	737	953.5	792	461	ø 15.88 (5/8)	ø 9.52 (3/8)
N°XAMT 36A1 12AA	(21)	(18-13/16)	(15-1/8)	(10-1/2)	(43-7/8)	(29-1/16)	(37-9/16)	(31-3/16)	(18-3/16)		



N*XAMT12A112AA N*XAMT18A112AA N*XAMT24A112AA
N*XAMT30A112AA N*XAMT36A112AA



Manipulation Details

1. Performing a test run for fan

To perform a test run for the fan,
 turn on the SWE on the control board while the indoor unit is being powered.

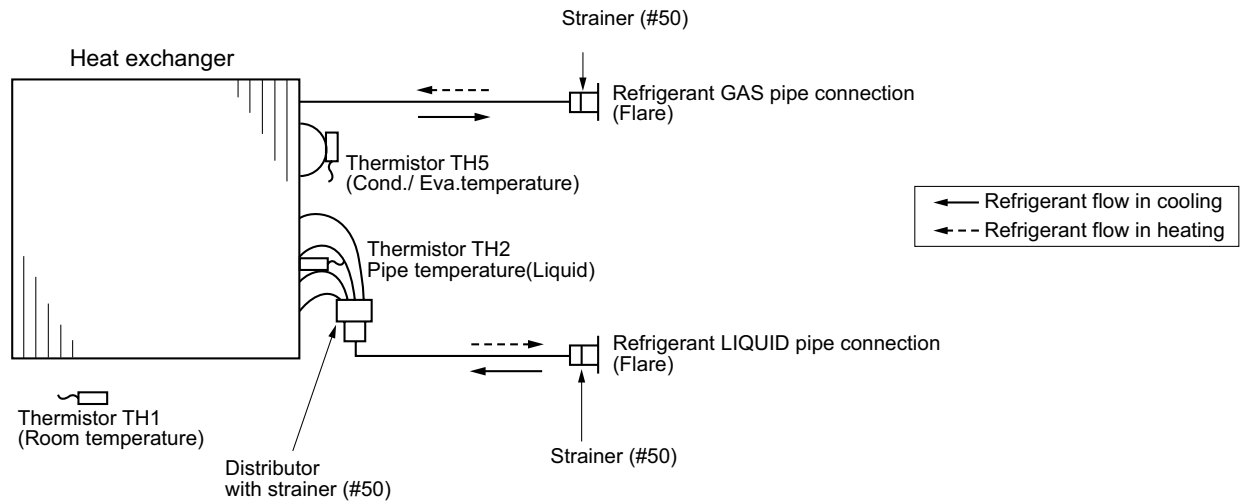
Be sure to turn off the SWE after completing a test run.

(Note) The SWE should not be left turned on for longer than 10 hours.

2. OPERATION of LED for indoor circuit board service

Symbol	LED operation under normal state
LED1	At applying main power source → Lighting
LED2	At receiving MA transmission power source → Lighting
LED3	At transmitting indoor-outdoor units → Flashing

N*XAMT12A112AA N*XAMT18A112AA N*XAMT24A112AA
 N*XAMT30A112AA N*XAMT36A112AA



N*XAMT12A112AA N*XAMT18A112AA N*XAMT24A112AA
N*XAMT30A112AA N*XAMT36A112AA

			Small Cabinet			Medium Cabinet	
Item / Model			N*XAMT12A112AA	N*XAMT18A112AA	N*XAMT24A112AA	N*XAMT30A112AA	N*XAMT36A112AA
Power Source			208/230V, 1-phase, 60hZ				
Cooling capacity/Heating capacity		Btu/h	12,000 / 13,500	18,000 / 22,800	24,000 / 27,000	30,000 / 34,000	36,000 / 40,000
		kW	3.5/4.0	5.3/6.7	7.0 / 7.9	8.8 / 10.0	10.6 / 11.7
Tonnage			1	1.5	2	2.5	3
Dimensions	Height	mm [in]	1,101 [39-3/4]			1,113.8 [43-7/8]	
	Width	mm [in]	432 [17]				
	Depth	mm [in]	548 [21-5/8]				
Net weight		kg [lb]	43 [93]			54 [119]	
Fan	Airflow rate (Low-Mid-High)	CFM	314 – 381 – 448	471 – 573 – 675	515 - 625 - 735	613 - 744 - 875	767 - 931 - 1,095
	External static pressure	in. WG	0.30 - 0.50 - 0.80				
		[Pa]	[75 - 125 - 200]				
Sound Pressure (Low - Mid - High)		dB(A)	29 - 34 - 37	31 - 35 - 39	30-34-38	32-36-40	35-39-43

Notes:

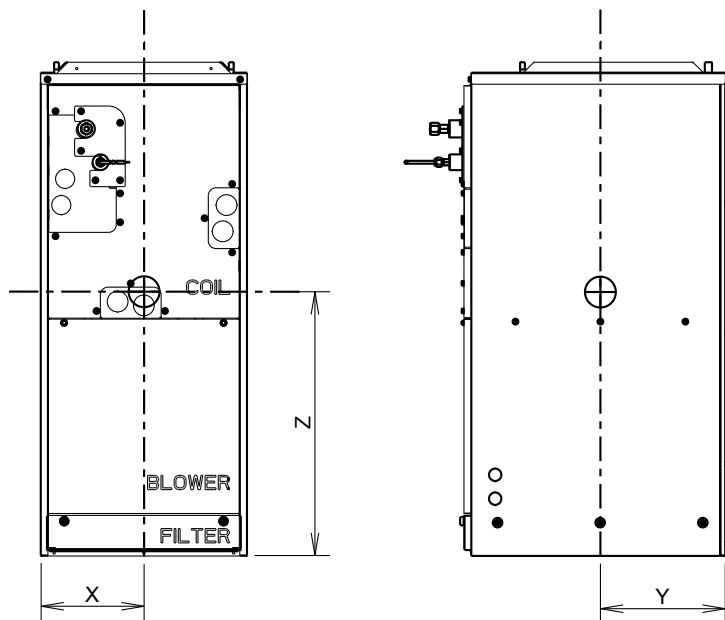
- Rating conditions (cooling)
Indoor : 80 °F [26.7 °C] D.B., 67 °F [19.4 °C] W.B.
Outdoor : 95 °F [35 °C] D.B.
- Rating conditions (heating)
Indoor : 70 °F [21.1 °C] D.B.
Outdoor : 47 °F [8.3 °C] D.B., 43 °F [6.1 °C] W.B.
- The indicated capacity is the value when one indoor unit is connected to the outdoor unit.
- Specifications subject to change without notice.
- The external static pressure is set to 0.50 in. WG (125 Pa) at factory shipment.

Table 1. Guaranteed operating range

		Indoor
Cooling	Upper limit	95 °F [35 °C] D.B.
		71 °F [21.7 °C] W.B.
	Lower limit	67 °F [19.4 °C] D.B.
		57 °F [13.9 °C] W.B.
Heating	Upper limit	80 °F [26.7 °C] D.B.
		-
	Lower limit	70 °F [21.1 °C] D.B.
		-

- Units should be installed by licensed electric contractor accordingly to local code requirement.
- For outdoor units to be connected, refer to the Installation Manual that comes with the units.

Multi position



Unit: inch (mm)

Model name	X	Y	Z
N*XAMT12A112AA	8-1/2 (216)	11 (279)	19-1/2 (495)
N*XAMT18A112AA			
N*XAMT24A112AA			
N*XAMT30A112AA	10-1/2 (267)	12 (305)	22-1/2 (572)
N*XAMT36A112AA			

This product is designed and intended for use in the residential,
commercial and light-industrial environment.

Please be sure to put the contact address/telephone number on
this manual before handing it to the customer.

MITSUBISHI ELECTRIC TRANE HVAC US LLC

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