

# FJM

# Technical Data Book

Wall-Mounted for CIS (AR 5000)

**SAMSUNG**

# History

Version	Modification	Date	Remark
Ver.1.0	Released FJM TDB	13.07.05	
Ver.1.1	Modification for erros : Size for Maldives(5, 6.8kW) in Specification	15.08.10	

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*3 Dimensional drawing (Indoor)*

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*4 Electrical wiring diagram  
(Indoor)*

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*5 Sound pressure level (Indoor)*

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*6 Sound power level (Indoor)*

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# 1 Nomenclature

## Indoor Units

### Model Names

AJ	020	H	B	A	P	E	H	/	* *
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		Buyer

#### (1) Classification

AJ	FJM
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#### (2) Capacity

x 100 Watt (3digits)
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#### (3) Year

F	2013
H	2014

#### (4) Product Type

B	Indoor Unit
C	Outdoor Unit

#### (5) Feature 1

A	Wall-Mounted
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#### (6) Feature 2

P	Premium
D	Deluxe

#### (7) Feature 3

E	220~240V, 50Hz, 1Ø
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#### (8) Mode

H	Heat Pump (R410A)
C	Cooling Only (R410A)

## 2 Specifications

### AR 5000

Type				AR5000	AR5000
Model Name				AJ020HBADEH/TK	AJ025HBADEH/TK
Power Supply			Ø, #, V, Hz	1,2,220-240,50	1,2,220-240,50
Mode				HP	HP
Performance	Capacity (Nominal)	Cooling	kW	2.00	2.50
			Btu/h	6,800	8,500
		Heating	kW	2.20	3.30
			Btu/h	7,500	11,300
Power	Power Input (Nominal)	Cooling	W	30.00	30.00
		Heating	W	30.00	30.00
	Current Input (Nominal)	Cooling	A	0.30	0.30
		Heating	A	0.30	0.30
Fan	Motor	Type	-	Cross flow Fan	Cross flow Fan
		Output x n	W	-	-
	Air Flow Rate	UT/T/H/M/L/Q	CMM	9/8.4/8.1/7.4/7/5	11/10/9/8.5/7.5/5
			l/s	150/140/135/123/117/83	183/167/150/142/125/83
	External Pressure	Min / Std / Max	mmAq	-	-
			Pa	-	-
Piping Connections	Liquid Pipe	Ø, mm	6.35	6.35	
		Ø, inch	1/4"	1/4"	
	Gas Pipe	Ø, mm	9.52	9.52	
		Ø, inch	3/8"	3/8"	
Drain Pipe	Ø, mm	ID18 HOSE	ID18 HOSE		
Refrigerant	Type	-	R410A	R410A	
	Control Method	-	EEV not included	EEV not included	
Sound	Pressure		dBA	36/33/30/27/24/19	36/33/30/27/24/19
	Power	Cooling		54.0	54.0
Dimension	New Weight		kg	9.50	9.50
	Shipping Weight		kg	11.30	11.30
	Net Dimensions (WxHxD)		mm	826 x 261 x 261	826 x 261 x 261
	Shipping Dimensions (WxHxD)		mm	886 x 317 x 335	886 x 317 x 335
Panel Size	Panel Model		-	-	-
	Panel New Weight		kg	-	-
	Shipping Weight		kg	-	-
	Net Dimensions (WxHxD)		mm	-	-
	Shipping Dimensions (WxHxD)		mm	-	-
Additional Accessories	Drain Pump	Drain Pump	- / Model	-	-
		Max. lifting Height /	mm / liter / h	-	-
	Air Filter		-	-	-

- All figures comply with EN14511
- Nominal cooling capacities are based on;  
Indoor temperature : 27°C DB, 19°C WB / Outdoor temperature : 35°C DB, 24°C WB, Refrigerant piping : 5m , Level differences : 0m
- Nominal heating capacities are based on;  
Indoor temperature : 20°C DB, 15°C WB / Outdoor temperature : 7°C DB, 6°C WB, Refrigerant piping : 5m, Level differences : 0m
- Fan speed : Ultra Turbo/ Turbo / High / Medium / Low / Quiet
- Sound level was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
- Specifications may be subject to change without prior notice.

## 2 Specifications

### AR 5000

Type				AR5000	AR5000
Model Name				AJ035HBADEH/TK	AJ050HBADEH/TK
Power Supply			Ø, #, V, Hz	1,2,220-240,50	1,2,220-240,50
Mode				HP	HP
Performance	Capacity (Nominal)	Cooling	kW	3.50	5.00
			Btu/h	11,900	17,100
		Heating	kW	4.00	6.00
			Btu/h	13,600	20,500
Power	Power Input (Nominal)	Cooling	W	50.00	50.00
		Heating	W	50.00	50.00
	Current Input (Nominal)	Cooling	A	0.40	0.40
		Heating	A	0.40	0.40
Fan	Motor	Type	-	Cross flow Fan	Cross flow Fan
		Output x n	W	-	-
	Air Flow Rate	UT/T/H/M/L/Q	CMM	12/11/10/9/7.5/5	19/17/15.5/14/13/9.5
			l/s	200/183/167/150/125/83	317/283/258/233/217/158
	External Pressure	Min / Std / Max	mmAq	-	-
			Pa	-	-
Piping Connections	Liquid Pipe	Ø, mm	6.35	6.35	
		Ø, inch	1/4"	1/4"	
	Gas Pipe	Ø, mm	9.52	12.70	
		Ø, inch	3/8"	1/2"	
Drain Pipe	Ø, mm	ID18 HOSE	ID18 HOSE		
Refrigerant	Type	-	R410A	R410A	
	Control Method	-	EEV not included	EEV not included	
Sound	Pressure	UT/T/H/M/L/Q	dBA	37/34/31/28/25/19	41/38/35/32/29/25
	Power	Cooling		56.0	58.0
Dimension	New Weight		kg	9.50	13.20
	Shipping Weight		kg	11.30	15.40
	Net Dimensions (WxHxD)		mm	826 x 261 x 261	1,065 x 301 x 294
	Shipping Dimensions (WxHxD)		mm	886 x 317 x 335	1,123 x 354 x 384
Panel Size	Panel Model		-	-	-
	Panel New Weight		kg	-	-
	Shipping Weight		kg	-	-
	Net Dimensions (WxHxD)		mm	-	-
	Shipping Dimensions (WxHxD)		mm	-	-
Additional Accessories	Drain Pump	Drain Pump	- / Model	-	-
		Max. lifting Height /	mm / liter / h	-	-
	Air Filter		-	-	-

- All figures comply with EN14511
- Nominal cooling capacities are based on;
  - Indoor temperature : 27°C DB, 19°C WB / Outdoor temperature : 35°C DB, 24°C WB, Refrigerant piping : 5m , Level differences : 0m
- Nominal heating capacities are based on;
  - Indoor temperature : 20°C DB, 15°C WB / Outdoor temperature : 7°C DB, 6°C WB, Refrigerant piping : 5m, Level differences : 0m
- Fan speed : Ultra Turbo/ Turbo / High / Medium / Low / Quiet
- Sound level was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
- Specifications may be subject to change without prior notice.

## 2 Specifications

### AR 5000

Type				AR5000	
Model Name				AJ068HBADEH/TK	
Power Supply			Ø, #, V, Hz	1,2,220-240,50	
Mode				HP	
Performance	Capacity (Nominal)	Cooling	kW	6.80	
			Btu/h	23,200	
		Heating	kW	8.00	
			Btu/h	27,300	
Power	Power Input (Nominal)	Cooling	W	60.00	
		Heating	W	60.00	
	Current Input (Nominal)	Cooling	A	0.45	
		Heating	A	0.45	
Fan	Motor	Type	Cross flow Fan		
		Output x n	-		
	Air Flow Rate	UT/T/H/M/L/Q	CMM	19/18/16/14/12/9	
			l/s	317/300/267/233/200/150	
	External Pressure	Min / Std / Max	mmAq	-	
			Pa	-	
Piping Connections	Liquid Pipe	Ø, mm	6.35		
		Ø, inch	1/4"		
		Ø, mm	15.88		
	Gas Pipe	Ø, inch	5/8"		
		Drain Pipe	Ø, mm	ID18 HOSE	
Refrigerant	Type	-			
	Control Method	-			
Sound	Pressure	UT/T/H/M/L/Q	43/40/37/34/31/26		
	Power	Cooling	dBA		
Dimension	New Weight		kg	14.10	
	Shipping Weight		kg	16.10	
	Net Dimensions (WxHxD)		mm	1,065 x 301 x 294	
	Shipping Dimensions (WxHxD)		mm	1,123 x 354 x 384	
Panel Size	Panel Model		-		
	Panel New Weight		kg	-	
	Shipping Weight		kg	-	
	Net Dimensions (WxHxD)		mm	-	
	Shipping Dimensions (WxHxD)		mm	-	
Additional Accessories	Drain Pump	Drain Pump	- / Model		
		Max. lifting Height /	mm / liter / h	-	
	Air Filter		-		

- All figures comply with EN14511
- Nominal cooling capacities are based on;  
Indoor temperature : 27°C DB, 19°C WB / Outdoor temperature : 35°C DB, 24°C WB, Refrigerant piping : 5m , Level differences : 0m
- Nominal heating capacities are based on;  
Indoor temperature : 20°C DB, 15°C WB / Outdoor temperature : 7°C DB, 6°C WB, Refrigerant piping : 5m, Level differences : 0m
- Fan speed : Ultra Turbo/ Turbo / High / Medium / Low / Quiet
- Sound level was acquired in an anechoic room. Thus actual noise level may be different depending on the installation conditions.
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# 3 Dimensional drawing

AR 5000

AJ020HBADEH/TK, AJ025HBADEH/TK, AJ035HBADEH/TK

Units : mm / inches

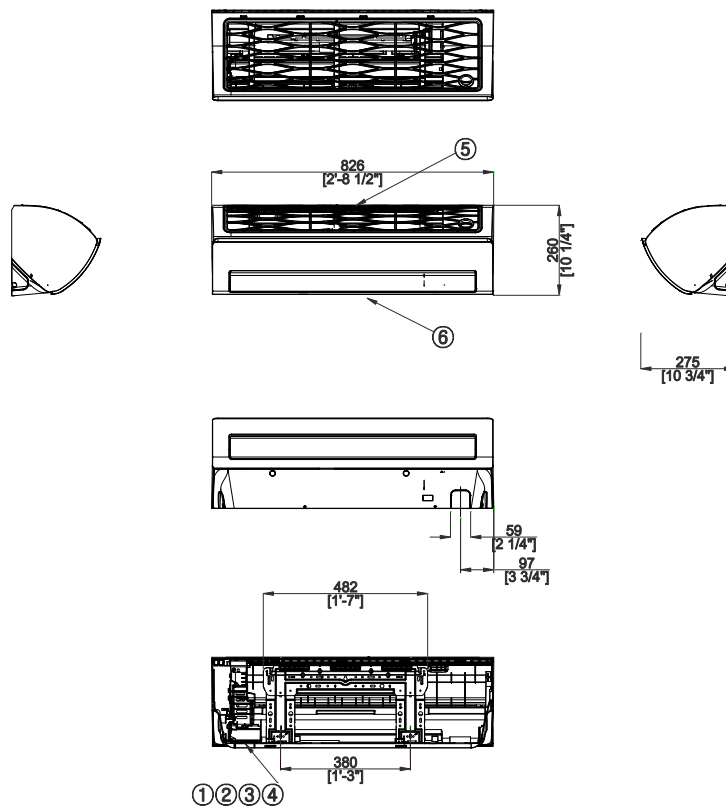


Table of descriptions

1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
3	Condensate drain	9	
4	Power & Comm. wiring conduits	10	
5	Air Inlet grille	11	
6	Air Outlet louver	12	



# 3 Dimensional drawing

AR 5000

AJ050HBADEH/TK, AJ068HBADEH/TK

Units : mm / inches

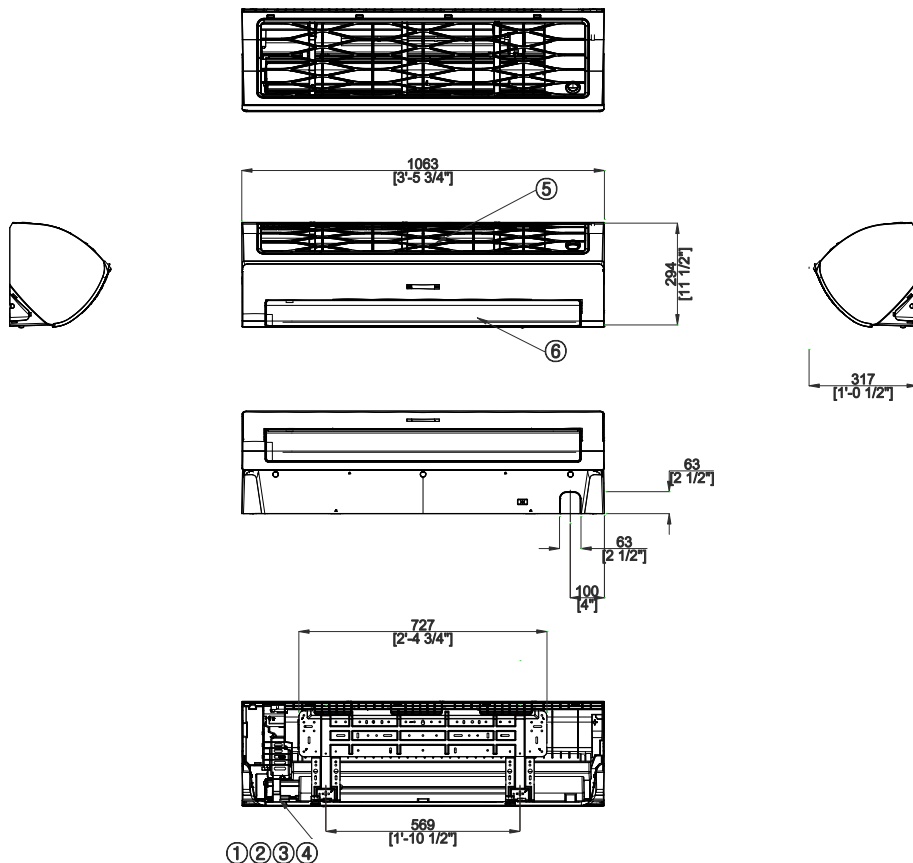


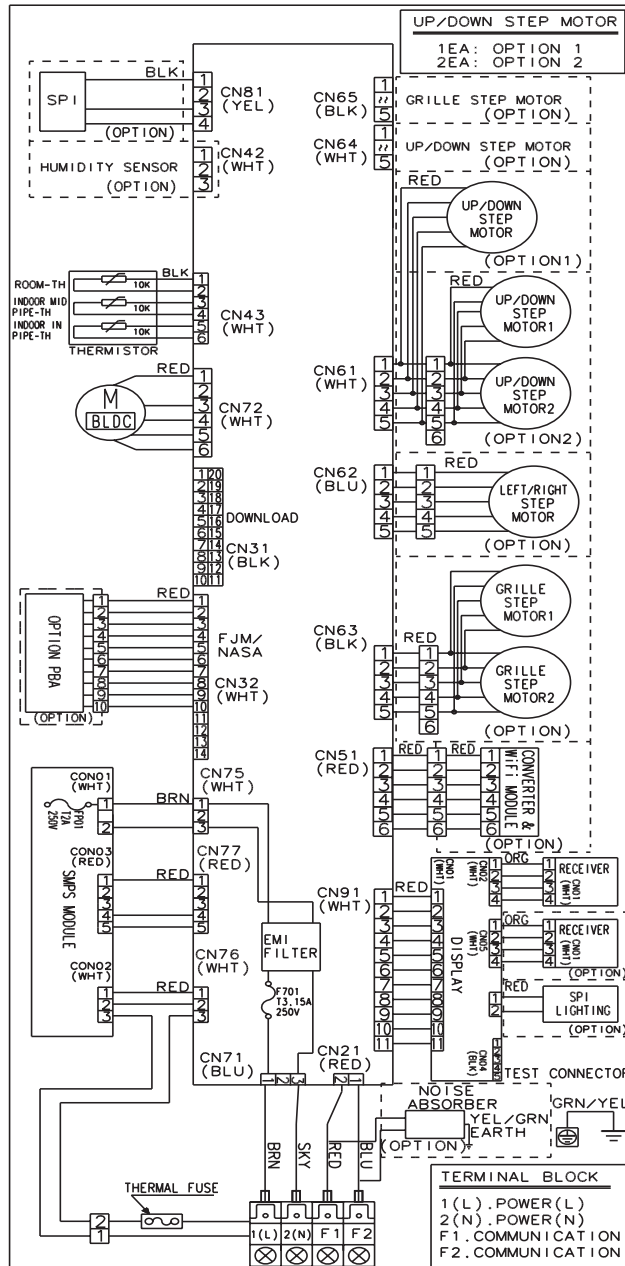
Table of descriptions

1	Refrigerant gas pipe	7	
2	Refrigerant liquid pipe	8	
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4	Power & Comm. wiring conduits	10	
5	Air Inlet grille	11	
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# 4 Electrical wiring diagram

AR 5000

AJ020HBADEH/TK, AJ025HBADEH/TK, AJ035HBADEH/TK, AJ050HBADEH/TK, AJ068HBADEH/TK



• NOTE - THERMISTOR MARK BASED ON THE TEMP 25°C

7-SEG	ERROR MODE			DESCRIPTION
	LED1 OPERATION	LED2 TIMER	LED3 OPTION	
E101, E102	○	⊕	⊖	Communication error (indoor ↔ outdoor)
E121	○	⊕	○	ROOM TH sensor error
E122, E123	⊕	⊕	○	INDOOR MID, INDOOR IN PIPE-TH sensor error
E154	○	○	⊕	Fan error(indoor)
E162	○	○	⊕	EEPROM error
E163	○	○	⊕	Option error
FROM E200	○	○	⊕	Outdoor error display
E422	○	○	⊕	EEV or Valve Close error-Self diagnosis

○ : LAMP ON    ○ : LAMP OFF    ⊕ : LAMP BLINK

• Note •

If the Set doesn't work (No power), check the Thermal fuse of Terminal block OPEN or SHORT with Multimeter.

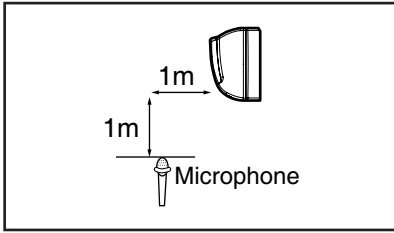
• Measure the Thermal fuse housing PIN#1 ~ 2 :  
OPEN(disconnection) → defective product

CODE NO:DB68-04014A

INDOOR-UNIT

# 5 Sound pressure level

## AR 5000



Unit: dB(A)

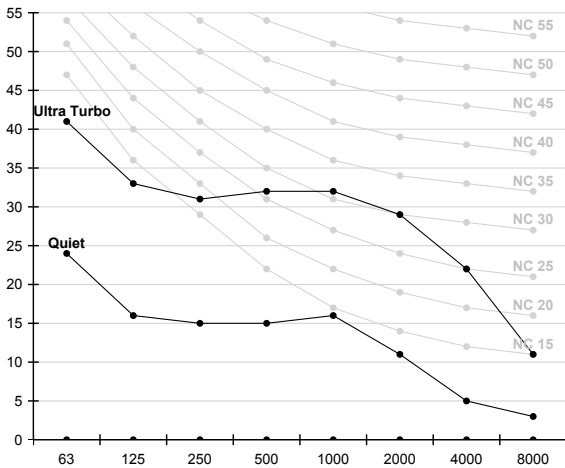
Model	UT	Q
AJ020HBADEH/TK	36.0	19.0
AJ025HBADEH/TK	36.0	19.0
AJ035HBADEH/TK	37.0	19.0
AJ050HBADEH/TK	41.0	25.0

### Note

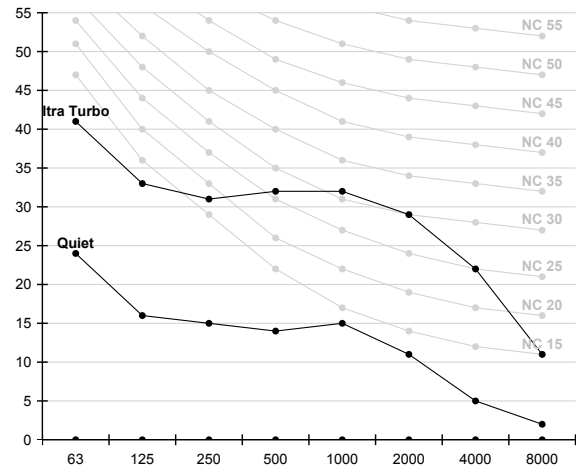
- Measuring place: Anechoic chamber (conversion value)
- These operation values were obtained in an anechoic room. Sound pressure level will vary depending on a construction of the particular room where the equipment is installed.
- Operation sound level may differ depending on operation and ambient conditions.

## NC curve

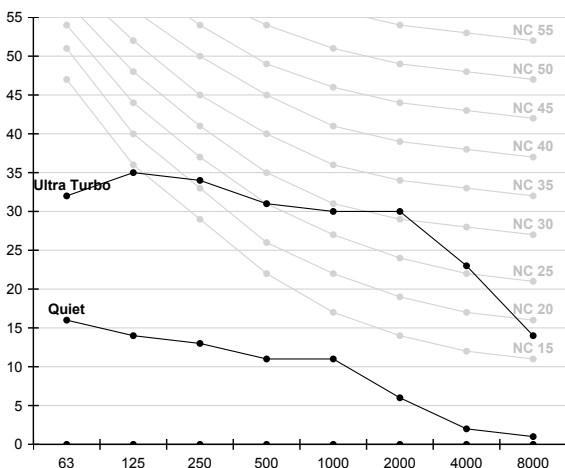
### 1) AJ020HBADEH/TK



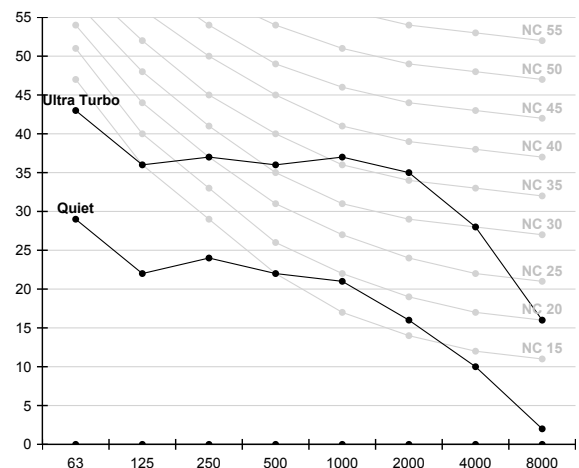
### 2) AJ025HBADEH/TK



### 3) AJ035HBADEH/TK

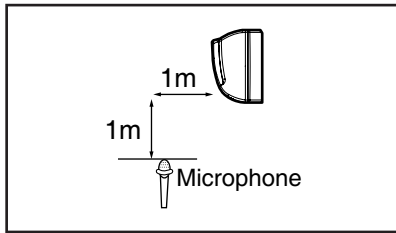


### 4) AJ050HBADEH/TK



# 5 Sound pressure level

## AR 5000



Unit: dB(A)

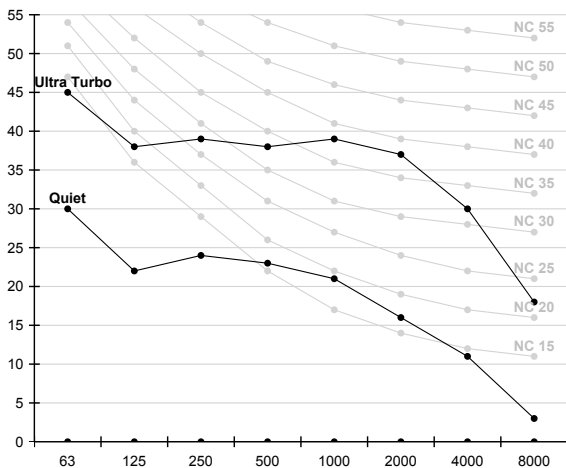
Model	UT	Q
AJ068HBADEH/TK	43.0	26.0

### Note

- Measuring place: Anechoic chamber (conversion value)
- These operation values were obtained in an anechoic room. Sound pressure level will vary depending on a construction of the particular room where the equipment is installed.
- Operation sound level may differ depending on operation and ambient conditions.

## NC curve

### 1) AJ068HBADEH/TK



# 6 Sound power level

## AR 5000

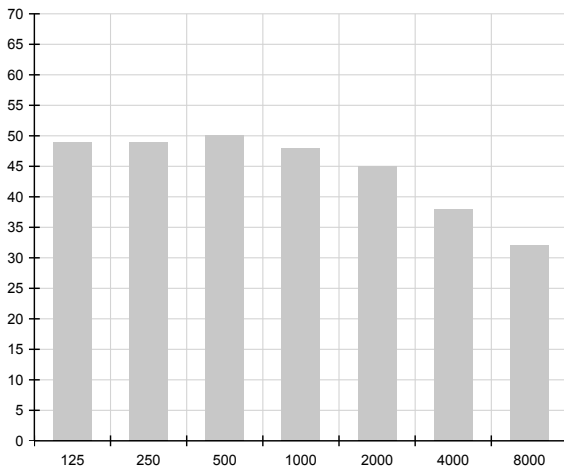
### Note

- dBA = A-Weighted sound power level.
- Reference power : 1pW
- Measured according to ISO 3741.

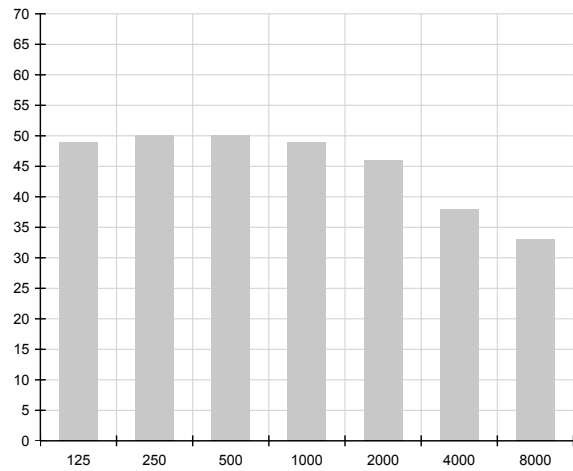
Unit: dB(A)

Model	Power
AJ020HBADEH/TK	54.0
AJ025HBADEH/TK	54.0
AJ035HBADEH/TK	56.0
AJ050HBADEH/TK	58.0

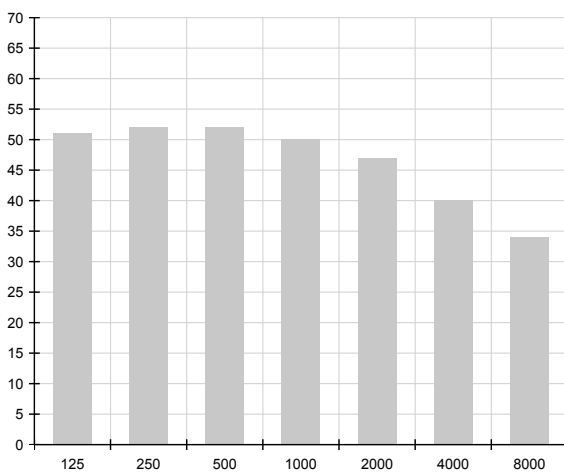
### 1)AJ020HBADEH/TK



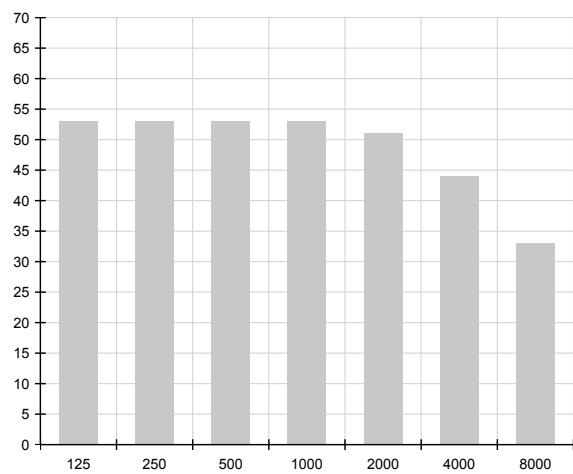
### 2)AJ025HBADEH/TK



### 3)AJ035HBADEH/TK



### 4)AJ050HBADEH/TK



# 6 Sound power level

## AR 5000

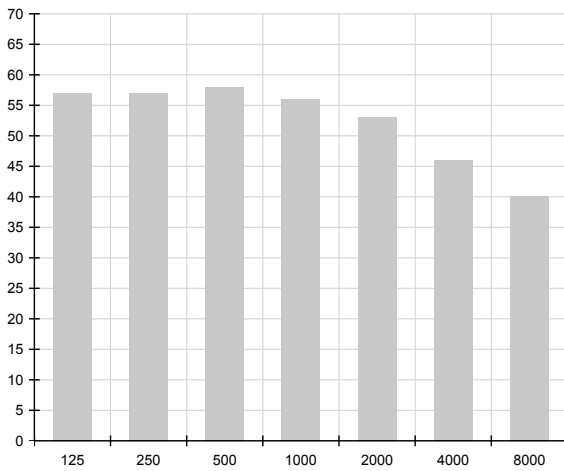
### Note

- dBA = A-Weighted sound power level.
- Reference power : 1pW
- Measured according to ISO 3741.

Unit: dB(A)

Model	Power
AJ068HBADEH/TK	62.0

### 1)AJ068HBADEH/TK



2014.07



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