



Air Conditioning Technical Data



EEDEN14-132

AZQS-BY1

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AZQS-BY1

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1 Features

- Daikin outdoor units are neat, sturdy and can easily be mounted on a roof or terrace or simply placed against an outside wall
- Outdoor units are fitted with either a swing or scroll compressor, renowned for low noise and high energy efficiency
- Outdoor units for pair application
- Seasonal efficiency, optimized for all seasons.
- Seasonal efficiency gives an indication on how efficient an air conditioner operates over an entire heating or cooling season.

1



Inverter



Auto cooling-
heating
changeover

2 Specifications

2-1 Nominal Capacity And Nominal Input			ADEQ100A/AZQS100BY1	ADEQ125A/AZQS125BY1	
Cooling capacity	Nom.	kW	9.5	12.1 (3)	
Heating capacity	Nom.	kW	10.8	13.5 (4)	
Seasonal efficiency (according to EN14825)	Cooling	Energy label		B	-
		Pdesign	kW	9.50	-
		SEER		4.81	-
		Annual energy consumption	kWh	691	-
	Heating (Average climate)	Energy label		A	-
		Pdesign	kW	7.60	-
		SCOP		3.81	-
		Annual energy consumption	kWh	2,792	-
Nominal efficiency (cooling at 35°/27° nominal load, heating at 7°/20° nominal load)	EER		3.21	3.01	
	COP		3.61	3.45	
	Annual energy consumption		kWh	1,480	2,010
	Energy label	Cooling		A	B
		Heating		A	B

Notes

(1) EER/COP according to Eurovent 2012

2-2 Nominal Capacity And Nominal Input			ACQ100B/AZQS100BY1	ACQ125B/AZQS125BY1	
Cooling capacity	Nom.	kW	9.5 (3)	12.1 (3)	
Heating capacity	Nom.	kW	10.8 (4)	13.5 (4)	
Seasonal efficiency (according to EN14825)	Cooling	Energy label		B	-
		Pdesign	kW	9.50	-
		SEER		4.65	-
		Annual energy consumption	kWh	715	-
	Heating (Average climate)	Energy label		A	-
		Pdesign	kW	7.60	-
		SCOP		3.47	-
		Annual energy consumption	kWh	3,066	-
Nominal efficiency (cooling at 35°/27° nominal load, heating at 7°/20° nominal load)	EER		3.21	3.01	
	COP		3.61	3.41	
	Annual energy consumption		kWh	1,480	2,010
	Energy label	Cooling		A	B
		Heating		A	B

Notes

(1) EER/COP according to Eurovent 2012

2-3 Nominal Capacity And Nominal Input			ABQ125A/AZQS125BY1	ABQ140A/AZQS140BY1	
Cooling capacity	Nom.	kW	12.1	13.0	
Heating capacity	Nom.	kW	13.5	15.5	
Seasonal efficiency (according to EN14825)	Cooling	Energy label		-	-
		Pdesign	kW	-	-
		SEER		-	-
		Annual energy consumption	kWh	-	-
	Heating (Average climate)	Energy label		-	-
		Pdesign	kW	-	-
		SCOP		-	-
		Annual energy consumption	kWh	-	-

2 Specifications

2

2-3 Nominal Capacity And Nominal Input				ABQ125A/AZQS125BY1		ABQ140A/AZQS140BY1	
Nominal efficiency (cooling at 35°/27° nominal load, heating at 7°/20° nominal load)	EER			2.91		3.01	
	COP			3.41			
	Annual energy consumption kWh			2,079		2,159	
	Energy label		Cooling	C		B	
		Heating		B			

Notes

(1) EER/COP according to Eurovent 2012

2-4 Nominal Capacity And Nominal Input				AHQ100C/AZQS100BY1		AHQ125C/AZQS125BY1		AHQ140C/AZQS140BY1			
Cooling capacity	Nom.			kW		9.5		12.1		13.0	
Heating capacity	Nom.			kW		10.8		13.5		15.5	
Seasonal efficiency (according to EN14825)	Cooling		Energy label		B						
			Pdesign kW		9.50						
			SEER		4.60						
			Annual energy consumption kWh		723						
	Heating (Average climate)		Energy label		A						
			Pdesign kW		7.60						
			SCOP		3.80						
			Annual energy consumption kWh		2,800						
Nominal efficiency (cooling at 35°/27° nominal load, heating at 7°/20° nominal load)	EER			2.62		2.63		3.01			
	COP			3.41		3.61		3.41			
	Annual energy consumption kWh			1,810		2,300		2,159			
	Energy label		Cooling		D				B		
		Heating		B		A		B			

Notes

(1) EER/COP according to Eurovent 2012

2-5 Technical Specifications					AZQS100BY1		AZQS125BY1		AZQS140BY1		
Capacity control	Method				Inverter controlled						
Casing	Colour				Ivory white						
	Material				Painted galvanized steel plate						
Dimensions	Unit		Height	mm	990				1,430		
			Width	mm	940						
			Depth	mm	320						
	Packed unit		Height	mm	1,170				1,610		
			Width	mm	1,015						
			Depth	mm	422						
Weight	Unit		kg		82				101		
	Packed unit		kg		88				108		
Heat exchanger	Fin		Type		WF fin						
			Treatment		Anti-corrosion treatment (PE)						
Compressor	Quantity				1						
	Type				Hermetically sealed swing compressor						
	Starting method				Inverter driven						
Fan	Type				Propeller fan						
	Discharge direction				Horizontal						
	Quantity				1				2		
	Air flow rate		Cooling	Nom.	m ³ /min	76		77		83	
				Super low	m ³ /min						
			Heating	Nom.	m ³ /min	83				62	
Super low				m ³ /min							
			cfm								

4

2 Specifications

2-5 Technical Specifications				AZQS100BY1	AZQS125BY1	AZQS140BY1	
Fan motor	Quantity			1		2	
	Model			Brushless DC motor			
	Output		W	200		94	
	Drive			Direct drive			
	Speed	Cooling	Super low	rpm	-		
Heating		Super low	rpm	-			
Sound power level	Cooling	Nom.	dBA	70	71	70	
Sound pressure level	Cooling	Nom.	dBA	53	54	53	
	Heating	Nom.	dBA	57	58	54	
	Night quiet mode	Level 1	dBA	49			
Operation range	Cooling	Ambient	Min.	°CDB	-5		
			Max.	°CDB	46		
	Heating	Ambient	Min.	°CWB	-15		
			Max.	°CWB	15.5		
Refrigerant	Type			R-410A			
	Charge		kg	2.9		4.0	
	Control			Expansion valve (electronic type)			
	GWP			1,975			
	Circuits	Quantity		1			
Refrigerant oil	Type			FVC50K			
	Charged volume		l	0.9		1.35	
Piping connections	Liquid	Quantity			1		
		Type			Flare connection		
		OD	mm		9.52		
	Gas	Quantity			1		
		Type			Flare connection		
		OD	mm		15.9		
	Drain	Quantity			5		
		Type			Hole		
		ID	mm		-		
		OD	mm		26		
	Piping length	OU - IU	Min.	m	5		
			Max.	m	50		
		System	Equivalent	m	70		
			Chargeless	m	30		
	Additional refrigerant charge			kg/m	See installation manual		
	Level difference	IU - OU	Max.	m	30.0		
IU - IU		Max.	m	0.5			
Heat insulation			Both liquid and gas pipes				
Defrost method			Reversed cycle				
Defrost control			Sensor for outdoor heat exchanger temperature				
Safety devices	Item	01	High pressure switch				
		02	Fan motor thermal protection				
		03	Fuse				

2-6 Electrical Specifications				AZQS100BY1	AZQS125BY1	AZQS140BY1
Power supply	Name			Y1		
	Phase			3N-		
	Frequency		Hz	50		
	Voltage		V	380-415		
	Voltage range	Min.	%	-10		
		Max.	%	10		
Current	Zmax	List	Complies to EN61000-3-11			
	Recommended fuses		A	20		
Current - 50Hz	Maximum fuse amps (MFA)		A	-		

2 Specifications

2-6 Electrical Specifications			AZQS100BY1	AZQS125BY1	AZQS140BY1
Current - 60Hz	Maximum fuse amps (MFA)	A	-		
Wiring connections	For power supply	Remark	See installation manual outdoor unit		
	For connection with indoor	Remark	See installation manual outdoor unit		
Power supply intake			Outdoor unit only		

2

Notes

- (1) See separate drawings for electrical data
- (2) PED unit category: excluded from scope of PED due to article 1, item 3.6 of 97/23/EC

3 Electrical data

3 - 1 Electrical Data

AZQS-BV1 AZQS-BY1																		
Indoor unit	Outdoor unit	Hz-Power supply	Voltage range				COMPRESSOR		OFM		IFM							
				MCA	TOCA	MFA	MSC	RLA	kW	FLA	kW	FLA						
ACQ71C	AZQS71BV1	50Hz ~220-240V	Max. 264V Min. 198V	18.8	-	20	-	16.2	0.07	0.3	0.067	0.52						
ABQ71B				19.1	-	20	-	16.2	0.07	0.3	0.170	0.74						
ADEQ71A				19.5	-	20	-	16.2	0.07	0.3	0.350	1.1						
AHQ71C	19.2			-	20	-	16.2	0.07	0.3	0.106	0.8							
ACQ100C	AZQS100BV1			50Hz ~220-240V	Max. 264V Min. 198V	28.5	-	32	-	24.4	0.2	0.6	0.094	0.77				
ADEQ100A						29.5	-	32	-	24.4	0.2	0.6	0.350	1.6				
AHQ100C						28.9	-	32	-	24.4	0.2	0.6	0.149	1.12				
ACQ125C	AZQS125BV1					50Hz ~220-240V	Max. 264V Min. 198V	28.9	-	32	-	24.4	0.2	0.6	0.137	1.12		
ABQ125A								28.8	-	32	-	24.4	0.2	0.6	0.480	1.07		
ADEQ125A								30.1	-	32	-	24.4	0.2	0.6	0.350	2.1		
AHQ125C	AZQS140BV1							50Hz ~220-240V	Max. 264V Min. 198V	29.3	-	32	-	24.4	0.2	0.6	0.171	1.43
ABQ140A										28.8	-	32	-	24.2	0.094+0.094	0.4+0.4	0.600	1.01
AHQ140C		30.7	-							32	-	24.2	0.094+0.094	0.4+0.4	0.320	2.52		
ACQ100C	AZQS100BY1	3N~50Hz 380-415V	Max. 456V Min. 342V							14.2	-	20	-	11.4	0.2	0.6	0.094	0.77
ADEQ100A										15.2	-	20	-	11.4	0.2	0.6	0.350	1.6
AHQ100C										14.6	-	20	-	11.4	0.2	0.6	0.149	1.12
ACQ125C	AZQS125BY1			3N~50Hz 380-415V	Max. 456V Min. 342V					14.6	-	20	-	11.4	0.2	0.6	0.137	1.12
ABQ125A										14.5	-	20	-	11.4	0.2	0.6	0.480	1.07
ADEQ125A										15.8	-	20	-	11.4	0.2	0.6	0.350	2.1
AHQ125C	AZQS140BY1					3N~50Hz 380-415V	Max. 456V Min. 342V			15.0	-	20	-	11.4	0.2	0.6	0.171	1.43
ABQ140A										17.8	-	20	-	14.2	0.094+0.094	0.4+0.4	0.600	1.01
AHQ140C										19.7	-	20	-	14.2	0.094+0.094	0.4+0.4	0.320	2.52

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SYMBOLS

MCA	: Min. Circuit Amps. (A)
TOCA	: Total Over-Current Amps. (A)
MFA	: Max. Fuse Amps (See note 7) (A)
MSC	: Max. current during the starting compressor. (A)
RLA	: Rated Load Amps. (A)
OFM	: Outdoor Fan Motor. (A)
IFM	: Indoor Fan Motor.
FLA	: Full Load Amps.
kW	: Fan Motor Rated Output (kW)

NOTES

- RLA is based on the following conditions:
Cooling
Indoor temperature 27.0°CDB/19.0°CWB
Outdoor temperature 35.0°CDB
Heating
Indoor temp.: 20°CDB
Outdoor temp.: 7°CDB/6°CWB
- TOCA means the total value of each OC set.
- Voltage range
Units are suitable for use on electrical systems where voltage supplied to unit terminals is not below or above listed range limits.
- Maximum allowable voltage variation between phases is 2%.
- MCA represents maximum input current.
MFA represents capacity which may accept MCA.
(next lower standard fuse rating, min.15A)
- Select wire size based on the larger value of MCA or TOCA.
- MFA is used to select the circuit breaker and the ground fault circuit interrupter.
(Earth leakage circuit breaker)

4 Options

4 - 1 Options

4

AZQS-BV1

AZQS-BY1

Name of option	Kit name		
	AZQS71BV1	AZQS100BV1	AZQS100BY1
	AZQS125BV1	AZQS125BY1	
	AZQS140BV1	AZQS140BY1	
Demand adapter kit	KRP58M51		

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5 Combination table

5 - 1 Combination Table

AZQS-BV1

AZQS-BY1

Sky-Air		Cassette			Duct			SC30 Duct			Ceiling suspended			
Model name		ACQ71C	ACQ100C	ACQ125C	ABQ71B	ABQ125A	ABQ140A	ADEQ71A	ADEQ100A	ADEQ125A	AHQ71C	AHQ100C	AHQ125C	AHQ140C
AZQS71BV1		P			P			P			P			
AZQS100BV1	AZQS100BY1		P						P			P		
AZQS125BV1	AZQS125BY1			P		P				P			P	
AZQS140BV1	AZQS140BY1						P							P

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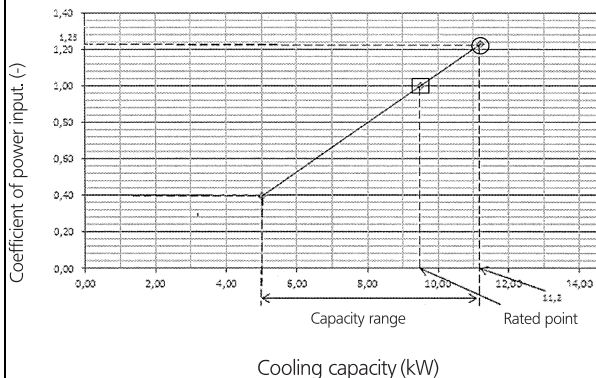
6 Capacity tables

6 - 1 Cooling Capacity Tables

6

AZQS100BV1
AZQS100BY1

Cooling



Cooling

Indoor		Outdoor temp. (°CDB)											
°CWB	°CDB	25			30			35			40		
(°C)	(°C)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16.0	22	11.2	7.61	1.01	10.8	7.44	1.11	10.5	7.29	1.22	10.1	7.09	1.32
18.0	25	11.8	7.59	1.01	11.4	7.49	1.12	11.0	7.27	1.23	10.5	7.09	1.33
19.0	27	12.0	7.57	1.02	11.6	7.44	1.12	11.2	7.26	1.23	10.8	7.04	1.33
19.5	27	12.1	7.59	1.02	11.7	7.37	1.13	11.4	7.34	1.23	10.9	7.04	1.34
22.0	30	12.8	7.52	1.02	12.4	7.36	1.13	11.9	7.16	1.24	11.5	7.03	1.35
24.0	32	13.3	7.42	1.03	12.9	7.27	1.14	12.4	7.06	1.25	12.0	6.91	1.36

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NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat.
- On the figure the mark ○ show the max. at standard conditions.
On the figure the mark □ show rated capacity and rated coefficient of power input.
However the max. capacity is not guaranteed, except at standard condition.
- SHC is based on indoor EWB and EDB.
SHC for other dry bulb temp. = SHC + SHC*.
SHC* = SHC correction for other dry bulb.
SHC* = 0.02 x AFR (m³/min.) x (1-BF) x (DB*-EDB)
- Capacities are based on following conditions:
Outdoor air: 85% RH. However, the condition rated capacity is 7°C DB/6°C WB. (heating)
Corresponding refrigerant piping length : 5.0 m
Level difference : 0 m
- Coefficient of power input is the percentage when the rated value is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating performance include the drop of frost formation.
- Air flow rate and (BF) are tabulated below.

(Pair)

	ACQ100C	ADEQ100A	AHQ100C
AFR	27.2	32.0	31.1
(BF)	(0.253)	(0.13)	(0.174)

- Rated power input of each model is tabulated below.

(Pair)

	ACQ100C	ADEQ100A	AHQ100C
Cooling	2.96	2.96	3.62

SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Maximum Total cooling (heating) capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)
	(comp.+indoor and outdoor fan motor)	
CPI:	Coefficient of power input.	(-)

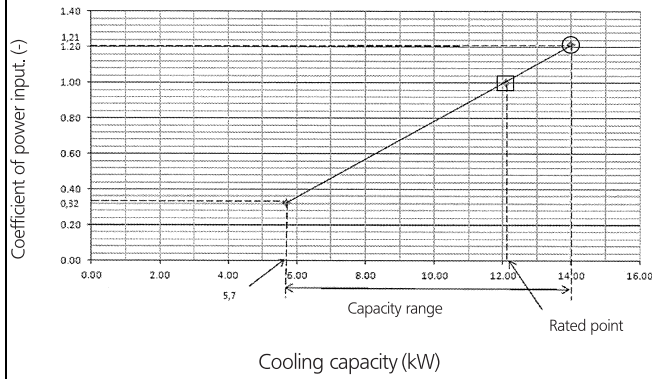
Caution:
TC and SHC are shown by kW.

6 Capacity tables

6 - 1 Cooling Capacity Tables

AZQS125BV1
AZQS125BY1

Cooling



Cooling

Indoor		Outdoor temp. (°CDB)											
°CWB	°CDB	25			30			35			40		
(°C)	(°C)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16.0	22	14.1	9.54	0.89	13.6	9.30	1.08	13.1	9.12	1.19	12.6	8.78	1.29
18.0	25	14.7	9.50	0.89	14.2	9.32	1.08	13.7	9.09	1.20	13.2	8.83	1.31
19.0	27	15.0	9.52	1.00	14.5	9.34	1.10	14.0	9.06	1.20	13.5	8.87	1.31
19.5	27	15.2	9.52	1.00	14.7	9.26	1.11	14.2	9.08	1.20	13.6	8.81	1.31
22.0	30	16.0	9.39	1.00	15.5	9.14	1.11	14.9	8.85	1.21	14.4	8.74	1.32
24.0	32	16.7	9.31	1.01	16.1	9.09	1.12	15.5	8.83	1.23	15.0	8.63	1.33

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NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat.
- On the figure the mark ○ show the max. at standard conditions.
On the figure the mark □ show rated capacity and rated coefficient of power input.
However the max. capacity is not guaranteed, except at standard condition.
- SHC is based on indoor EWB and EDB.
SHC for other dry bulb temp. = SHC + SHC*.
SHC* = SHC correction for other dry bulb.
SHC* = 0.02 x AFR (m³/min.) x (1-BF) x (DB*-EDB)
- Capacities are based on following conditions:
Outdoor air: 85% RH. However, the condition rated capacity is 7°C DB/6°C WB. (heating)
Corresponding refrigerant piping length : 5.0 m
Level difference : 0 m
- Coefficient of power input is the percentage when the rated value is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating performance include the drop of frost formation.
- Air flow rate and (BF) are tabulated below.

(Pair)

	ACQ125C	ABQ125A	ADEQ125A	AHQ125C
AFR	34.0	40.5	39.0	34.4
(BF)	(0.10)	(0.157)	(0.16)	(0.123)

- Rated power input of each model is tabulated below.

(Pair)

	ACQ125C	ABQ125A	ADEQ125A	AHQ125C
Cooling	4.02	4.16	4.02	4.60

SYMBOLS

- AFR: Air flow rate (m³/min)
- BF: Bypass factor
- EWB: Entering wet bulb temp. (°CWB)
- EDB: Entering dry bulb temp. (°CDB)
- TC: Maximum Total cooling (heating) capacity (kW)
- SHC: Sensible heating capacity (kW)
- PI: Power input (kW)
- (comp.+indoor and outdoor fan motor)
- CPI: Coefficient of power input (-)

Caution:
TC and SHC are shown by kW.

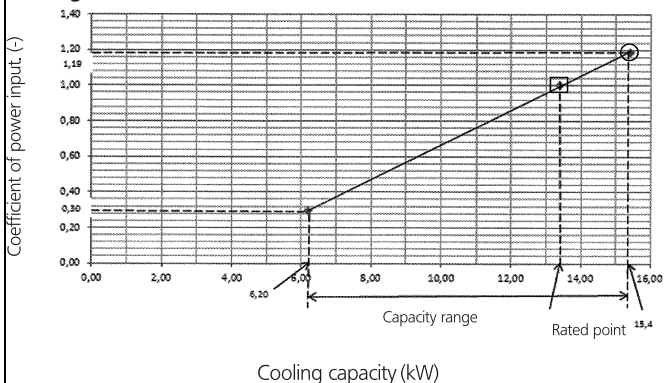
6 Capacity tables

6 - 1 Cooling Capacity Tables

6

AZQS140BV1
AZQS140BY1

Cooling



Cooling

Indoor		Outdoor temp. (°CDB)											
°CWB	°CDB	25			30			35			40		
(°C)	(°C)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)	TC (kW)	SHC (kW)	CPI (-)
16.0	22	15.5	10.47	0.98	14.9	10.25	1.08	14.4	10.03	1.18	13.9	9.69	1.28
18.0	25	16.2	10.55	0.98	15.6	10.21	1.09	15.1	10.01	1.19	14.5	9.71	1.30
19.0	27	16.6	10.43	0.99	16.0	10.18	1.09	15.4	9.98	1.19	14.8	9.76	1.30
19.5	27	16.7	10.49	0.99	16.1	10.16	1.10	15.6	10.00	1.19	15.0	9.66	1.30
22.0	30	17.6	10.37	0.99	17.0	10.16	1.10	16.4	9.83	1.21	15.8	9.60	1.31
24.0	32	18.4	10.20	1.00	17.7	10.00	1.11	17.0	9.67	1.22	16.4	9.47	1.32

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NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat.
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On the figure the mark □ show rated capacity and rated coefficient of power input.
However the max. capacity is not guaranteed, except at standard condition.
- SHC is based on indoor EWB and EDB.
SHC for other dry bulb temp. = SHC + SHC*.
SHC* = SHC correction for other dry bulb.
SHC* = 0.02 x AFR (m³/min.) x (1-BF) x (DB*-EDB)
- Capacities are based on following conditions:
Outdoor air: 85% RH. However, the condition rated capacity is 7°C DB/6°C WB. (heating)
Corresponding refrigerant piping length : 5.0 m
Level difference : 0 m
- Coefficient of power input is the percentage when the rated value is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating performance include the drop of frost formation.
- Air flow rate and (BF) are tabulated below.

(Pair)

	ABQ140A	AHQ140C
AFR	48.7	43.9
(BF)	(0.15)	(0.157)

- Rated power input of each model is tabulated below.

(Pair)

	ABQ140A	AHQ140C
Cooling	4.32	4.32

SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Maximum Total cooling (heating) capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)
	(comp.+indoor and outdoor fan motor)	
CPI:	Coefficient of power input.	(-)

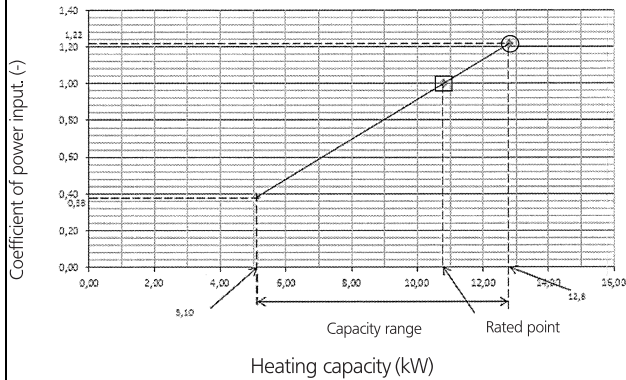
Caution:
TC and SHC are shown by kW.

6 Capacity tables

6 - 2 Heating Capacity Tables

AZQS100BV1
AZQS100BY1

Heating



Heating

Indoor °CDB (°C)	-15.0		-10.0		-5.0		0.0		6.0		10.0	
	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)
16	8.58	0.93	9.45	0.99	10.1	1.02	10.4	1.05	12.8	1.12	13.8	1.18
18	8.57	0.97	9.44	1.02	10.0	1.07	10.3	1.10	12.8	1.17	13.8	1.23
20	8.56	1.01	9.43	1.07	10.0	1.11	10.3	1.14	12.8	1.22	13.8	1.28
21	8.56	1.03	9.42	1.09	10.0	1.13	10.3	1.16	12.8	1.24	13.8	1.30
22	8.55	1.04	9.42	1.10	10.0	1.14	10.3	1.18	12.8	1.26	13.8	1.33
24	8.54	1.09	9.41	1.15	10.0	1.19	10.3	1.23	12.8	1.31	13.8	1.38

3D081255C

NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat.
- On the figure the mark ○ show the max. at standard conditions.
On the figure the mark □ show rated capacity and rated coefficient of power input.
However the max. capacity is not guaranteed, except at standard condition.
- SHC is based on indoor EWB and EDB.
SHC for other dry bulb temp. = SHC + SHC*.
SHC* = SHC correction for other dry bulb.
SHC* = 0.02 x AFR (m³/min.) x (1-BF) x (DB* - EDB)
- Capacities are based on following conditions:
Outdoor air: 85% RH. However, the condition rated capacity is 7°C DB/6°C WB. (heating)
Corresponding refrigerant piping length : 5.0 m
Level difference : 0 m
- Coefficient of power input is the percentage when the rated value is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and (BF) are tabulated below.

(Pair)

	ACQ100C	ADEQ100A	AHQ100C
AFR	27.2	32.0	31.1
(BF)	(0.253)	(0.13)	(0.174)

- Rated power input of each model is tabulated below.

(Pair)

	ACQ100C	ADEQ100A	AHQ100C
Heating	2.99	2.99	3.17

SYMBOLS

- AFR: Air flow rate (m³/min)
- BF: Bypass factor
- EWB: Entering wet bulb temp. (°CWB)
- EDB: Entering dry bulb temp. (°CDB)
- TC: Maximum Total cooling (heating) capacity (kW)
- SHC: Sensible heating capacity (kW)
- PI: Power input (comp.+indoor and outdoor fan motor) (kW)
- CPI: Coefficient of power input (-)

Caution:
TC and SHC are shown by kW.

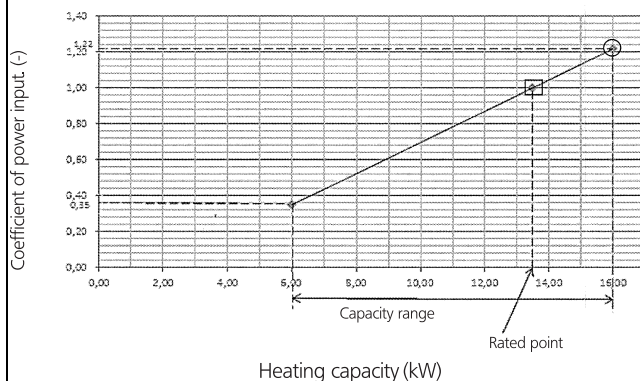
6 Capacity tables

6 - 2 Heating Capacity Tables

6

AZQS125BV1
AZQS125BY1

Heating



Heating

Indoor °CDB (°C)	-15.0		-10.0		-5.0		0.0		6.0		10.0	
	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)
16	10.7	0.93	11.8	0.99	12.6	1.02	13.0	1.05	16.0	1.12	17.3	1.18
18	10.7	0.97	11.8	1.02	12.5	1.07	12.9	1.10	16.0	1.17	17.3	1.23
20	10.7	1.01	11.8	1.07	12.5	1.11	12.9	1.14	16.0	1.22	17.3	1.28
21	10.7	1.03	11.8	1.09	12.5	1.13	12.9	1.16	16.0	1.24	17.3	1.31
22	10.7	1.04	11.8	1.10	12.5	1.14	12.9	1.18	16.0	1.27	17.3	1.33
24	10.7	1.09	11.8	1.15	12.5	1.19	12.9	1.23	16.0	1.31	17.3	1.38

3D081256C

NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat.
- On the figure the mark ○ show the max. at standard conditions.
On the figure the mark □ show rated capacity and rated coefficient of power input.
However the max. capacity is not guaranteed, except at standard condition.
- SHC is based on indoor EWB and EDB.
SHC for other dry bulb temp. = SHC + SHC*.
SHC* = SHC correction for other dry bulb.
SHC* = 0.02 x AFR (m³/min.) x (1-BF) x (DB*-EDB)
- Capacities are based on following conditions:
Outdoor air: 85% RH. However, the condition rated capacity is 7°C DB/6°C WB. (heating)
Corresponding refrigerant piping length : 5.0 m
Level difference : 0 m
- Coefficient of power input is the percentage when the rated value is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and (BF) are tabulated below.

(Pair)

	ACQ125C	ABQ125A	ADEQ125A	AHQ125C
AFR	34.0	40.5	39.0	34.4
(BF)	(0.10)	(0.157)	(0.16)	(0.123)

- Rated power input of each model is tabulated below.

(Pair)

	ACQ125C	ABQ125A	ADEQ125A	AHQ125C
Heating	3.96	3.96	3.91	3.74

SYMBOLS

AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Maximum Total cooling (heating) capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)
	(comp.+indoor and outdoor fan motor)	
CPI:	Coefficient of power input.	(-)

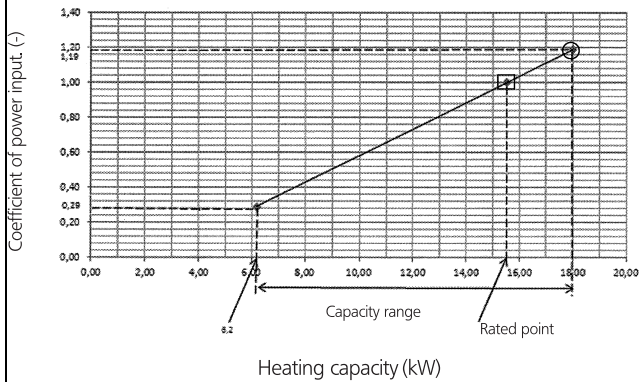
Caution:
TC and SHC are shown by kW.

6 Capacity tables

6 - 2 Heating Capacity Tables

AZQS140BV1
AZQS140BV1

Heating



Heating

Indoor °CDB (°C)	-15.0		-10.0		-5.0		0.0		6.0		10.0	
	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)	TC (kW)	CPI (-)
16	11.6	0.91	12.7	0.97	13.6	1.00	13.9	1.03	18.0	1.09	19.4	1.16
18	11.6	0.95	12.7	1.00	13.6	1.04	13.9	1.07	18.0	1.14	19.4	1.21
20	11.6	0.99	12.7	1.05	13.5	1.09	13.9	1.11	18.0	1.19	19.4	1.25
21	11.5	1.00	12.7	1.06	13.5	1.11	13.9	1.13	18.0	1.21	19.4	1.28
22	11.5	1.02	12.7	1.08	13.5	1.12	13.9	1.16	18.0	1.24	19.4	1.30
24	11.5	1.07	12.6	1.12	13.5	1.17	13.9	1.20	18.0	1.29	19.4	1.35

3D081257A

NOTES

- Ratings shown are net capacities which include a deduction for indoor fan motor heat.
- On the figure the mark ○ show the max. at standard conditions.
On the figure the mark □ show rated capacity and rated coefficient of power input.
However the max. capacity is not guaranteed, except at standard condition.
- SHC is based on indoor EWB and EDB.
SHC for other dry bulb temp. = SHC + SHC*.
SHC* = SHC correction for other dry bulb.
SHC* = 0.02 x AFR (m³/min.) x (1-BF) x (DB*-EDB)
- Capacities are based on following conditions:
Outdoor air: 85% RH. However, the condition rated capacity is 7°C DB/6°C WB. (heating)
Corresponding refrigerant piping length : 5.0 m
Level difference : 0 m
- Coefficient of power input is the percentage when the rated value is defined as 1.00.
- The value contains less than 5% error according to indoor unit type.
- Heating capacity include the drop of frost formation.
- Air flow rate and (BF) are tabulated below.

(Pair)

	ABQ140A	AHQ140C
AFR	48.7	43.9
(BF)	(0.15)	(0.157)

- Rated power input of each model is tabulated below.

(Pair)

	ABQ140A	AHQ140C
Heating	4.55	4.55

SYMBOLS

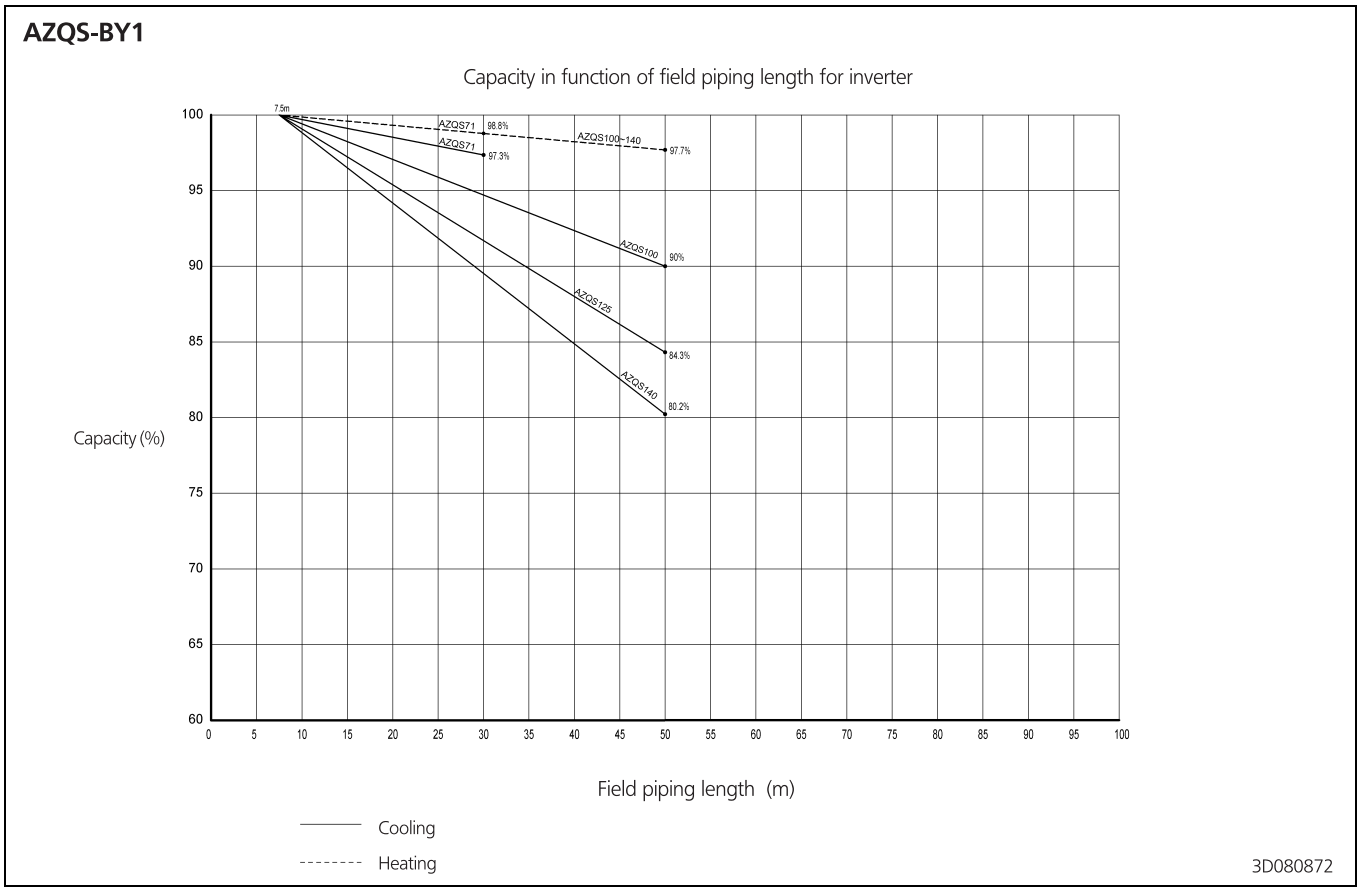
AFR:	Air flow rate	(m ³ /min)
BF:	Bypass factor	
EWB:	Entering wet bulb temp.	(°CWB)
EDB:	Entering dry bulb temp.	(°CDB)
TC:	Maximum Total cooling (heating) capacity	(kW)
SHC:	Sensible heating capacity	(kW)
PI:	Power input	(kW)
	(comp.+indoor and outdoor fan motor)	
CPI:	Coefficient of power input.	(-)

Caution:
TC and SHC are shown by kW.

6 Capacity tables

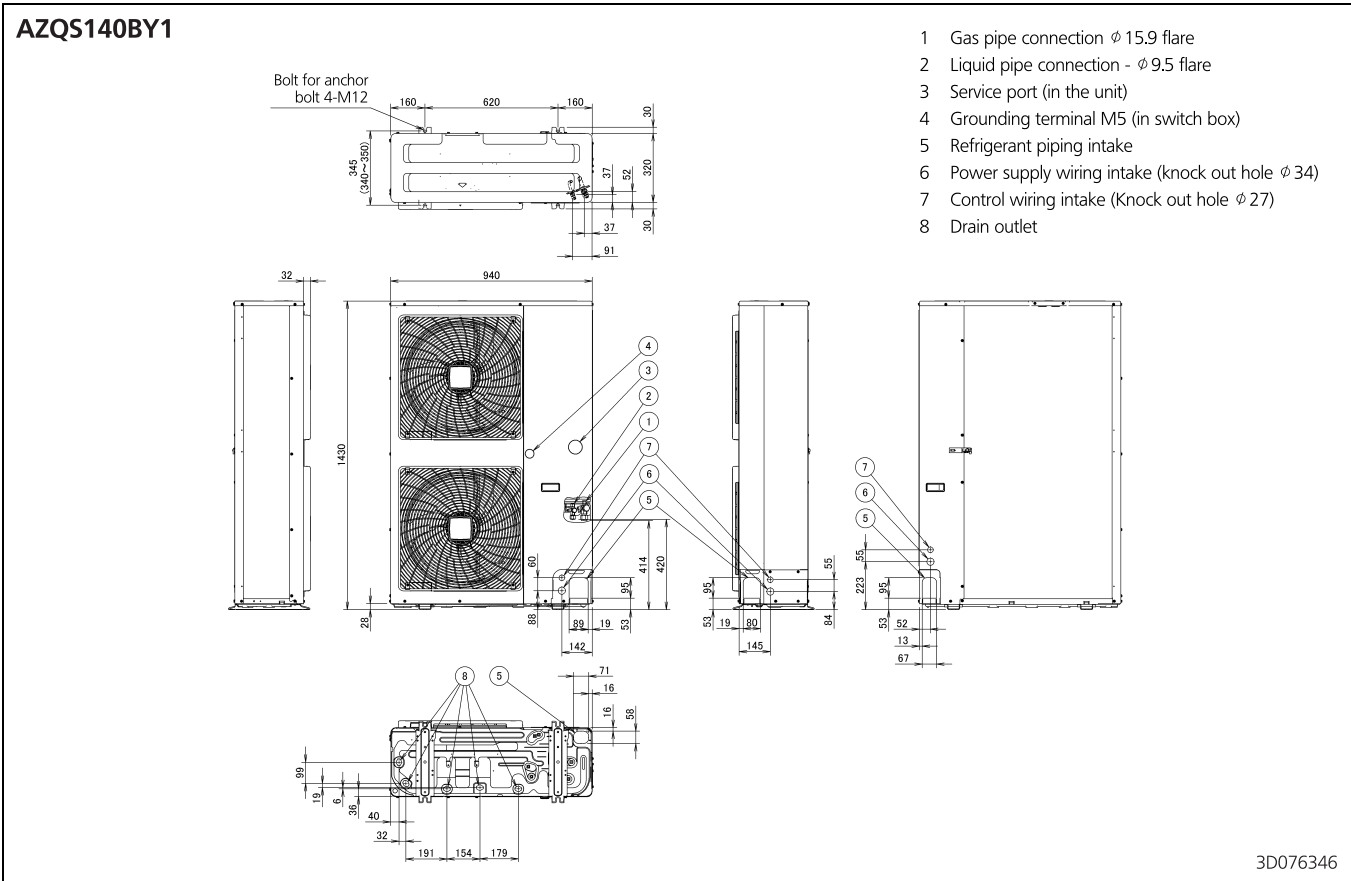
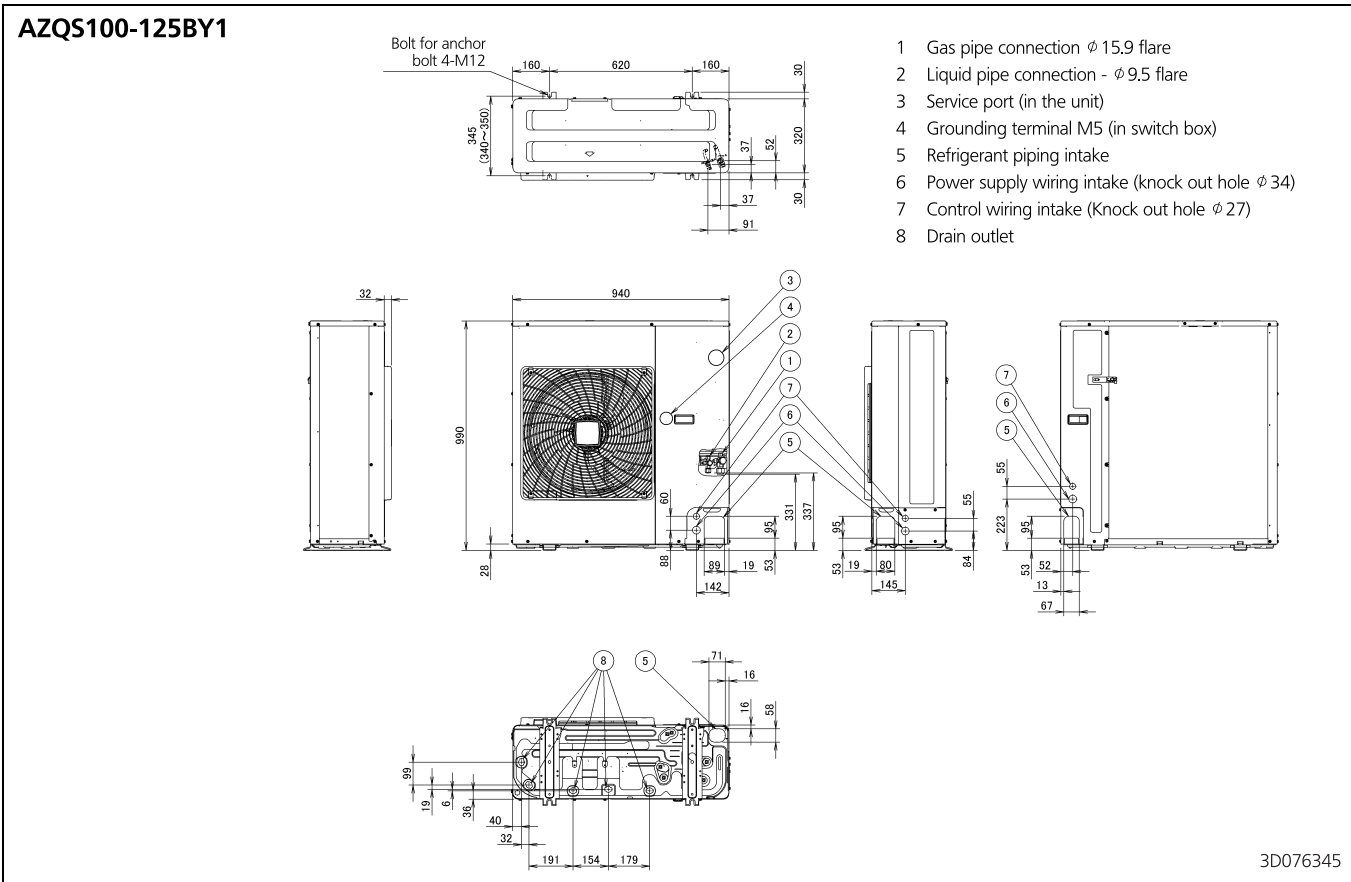
6 - 3 Capacity Correction Factor

6



7 Dimensional drawings

7 - 1 Dimensional Drawings

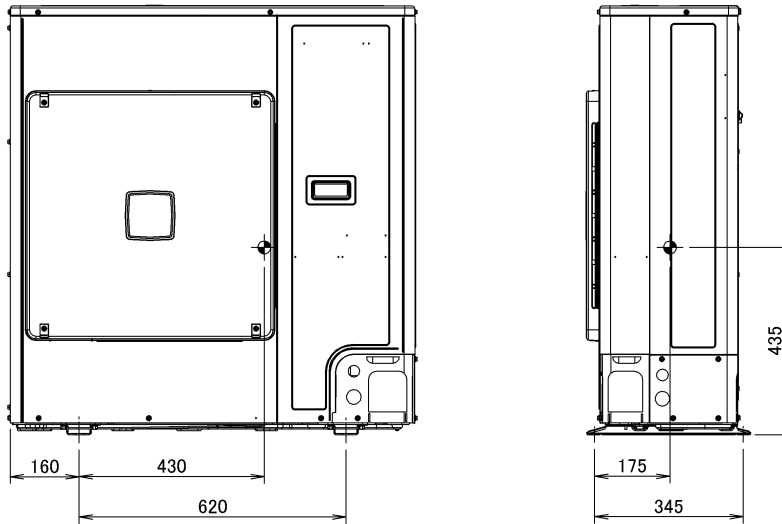


8 Centre of gravity

8 - 1 Centre of Gravity

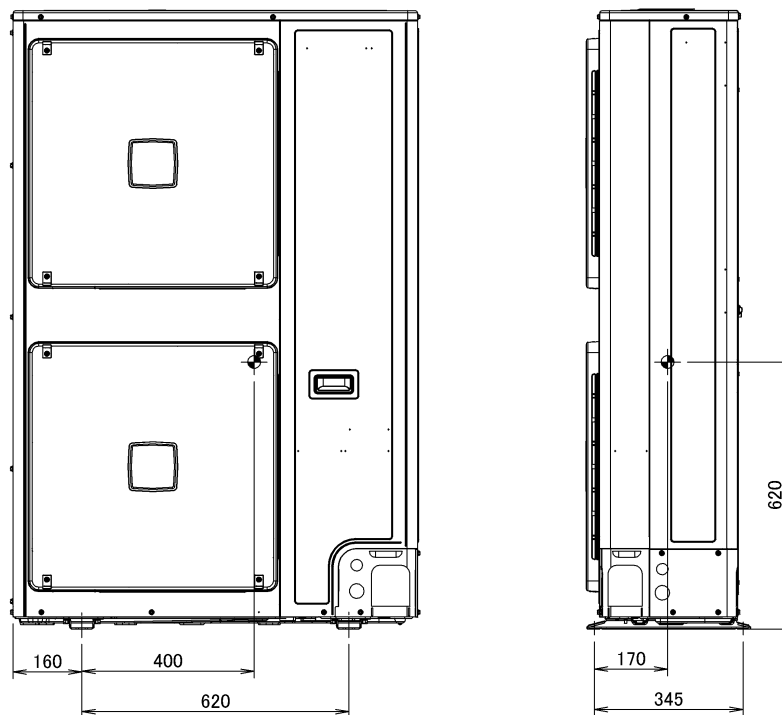
8

AZQS100-125BY1



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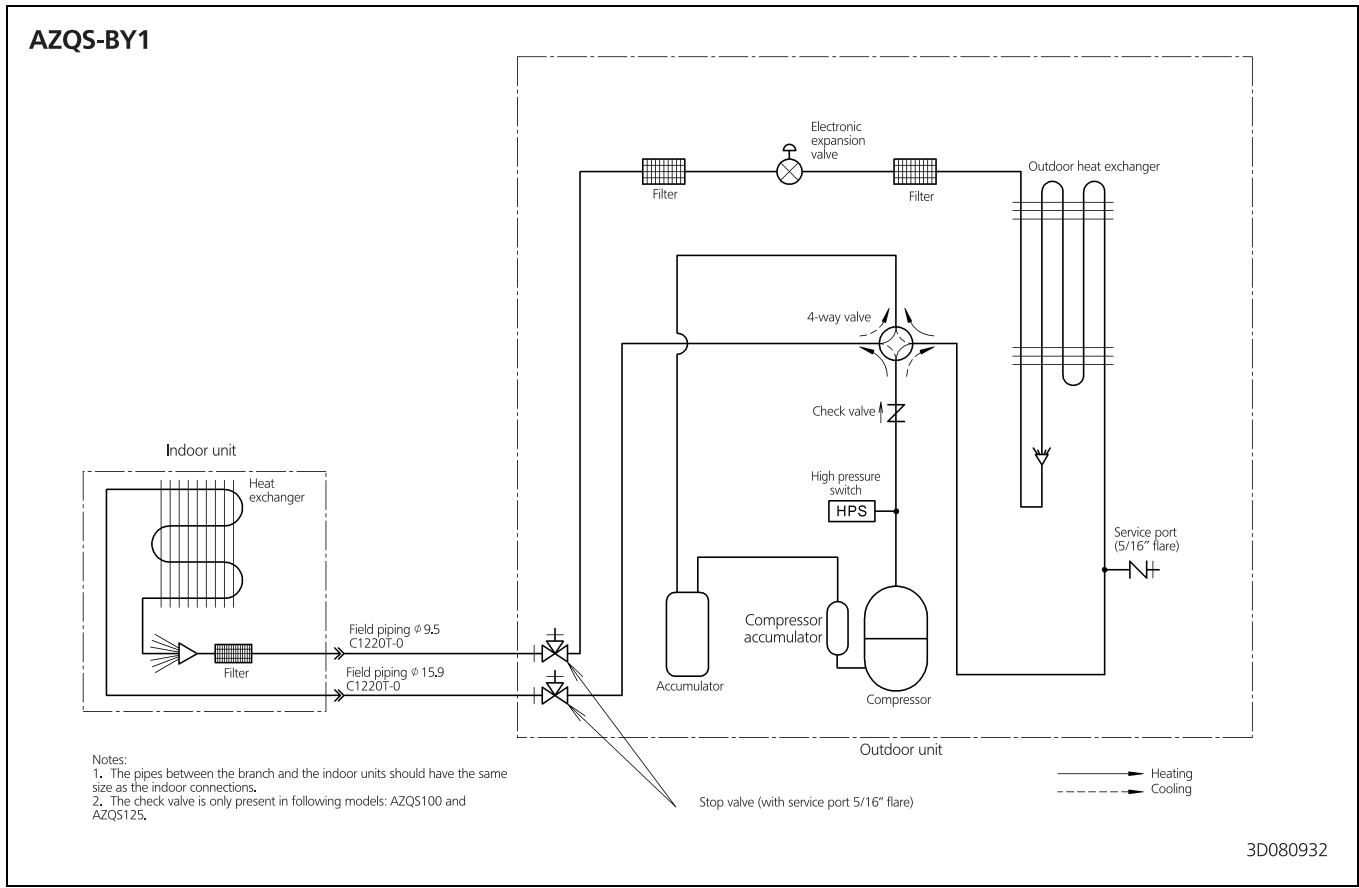
AZQS140BY1



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9 Piping diagrams

9 - 1 Piping Diagrams



10 Wiring diagrams

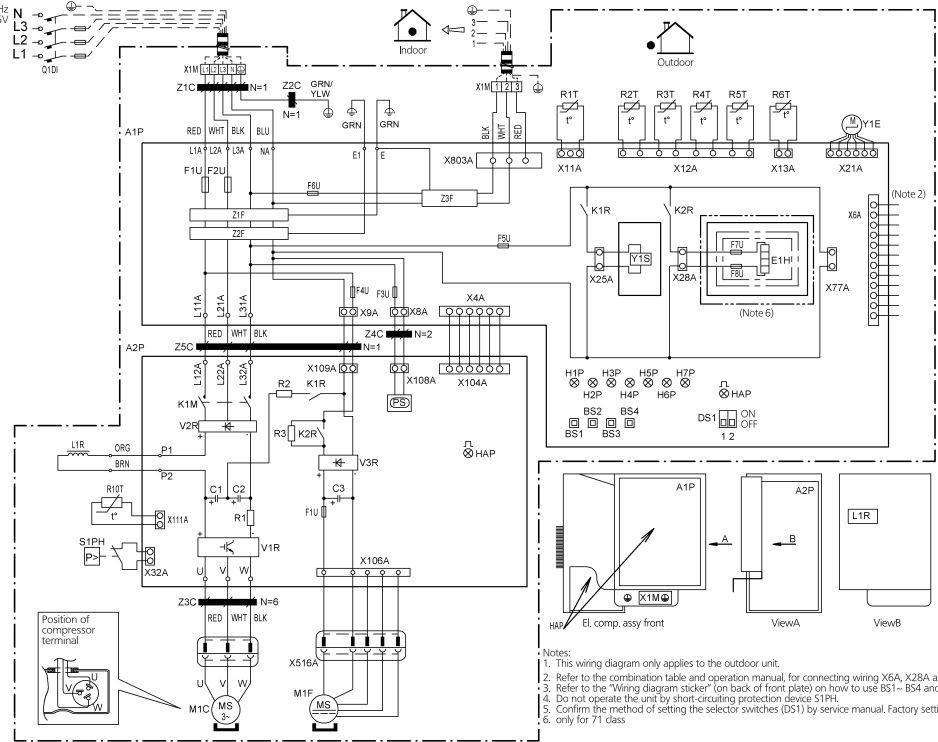
10 - 1 Wiring Diagrams - Three Phase

10

AZQS100-125BY1

- A1P : Printed circuit board
- A2P : Printed circuit board (inverter)
- BS1-BS2 : Push button switch
- C1-C3 : Capacitor
- DS1 : Dip switch
- E1H : Bottomplate heater (Option)
- F1U : Fuse (31.5A / 250V)
- F2U : Fuse (1.6A / 250V)
- F3U-F6U : Fuse (1.6A / 250V)
- F7U-F8U : Fuse (1.0A / 250V)
- F1U (A2P) : Fuse (F 5.0A / 250V)
- H1P-H7P : Light emitting diode (service monitor orange)
- HAP(A1P,A2P) : Light emitting diode (service monitor green)
- K1M : Magnetic contactor
- K1R (A1P) : Magnetic relay (Y1S)
- K1R (A2P) : Magnetic relay
- K2R (A1P) : Magnetic relay (E1H Option)
- K2R (A2P) : Magnetic relay
- L1R : Reactor
- M1C : Motor (compressor)
- M1F : Motor (fan) (upper)
- M2F : Motor (fan) (lower)
- M2F : Switching power supply
- PS : Earth leakage breaker (30mA)
- Q1D1 : Resistor
- R1-R3 : Resistor
- R1T : Thermistor (air)
- R2T : Thermistor (discharge)
- R3T : Thermistor (Suction)
- R4T : Thermistor (Heat exchanger)
- R5T : Thermistor (heat exchanger middle)
- R6T : Thermistor (liquid)
- R6T : Thermistor (fin)
- R10T : Thermistor (fin)
- S1PH : Pressure switch (High)
- V1R : IGBT Power module
- V2R,V3R : Diode module
- X6A : Connector (Option)
- X1M : Terminal strip
- Y1E : Electronic expansion valve
- Y1S : Solenoid valve (4 way valve)
- Z1C-Z2C : Noise filter (ferite core)
- Z1F-Z3F : Noise filter

- L: Live
 - N: Neutral
 - Field wiring
 - Protective earth (screw)
 - Noiseless earth
 - Terminal
 - Connection
 - Terminal strip
 - Connector
 - Relay connector
 - Option
- BLK: Black
BLU: Blue
BRN: Brown
GRN: Green
ORG: Orange
RED: Red
WHT: White
YLW: Yellow



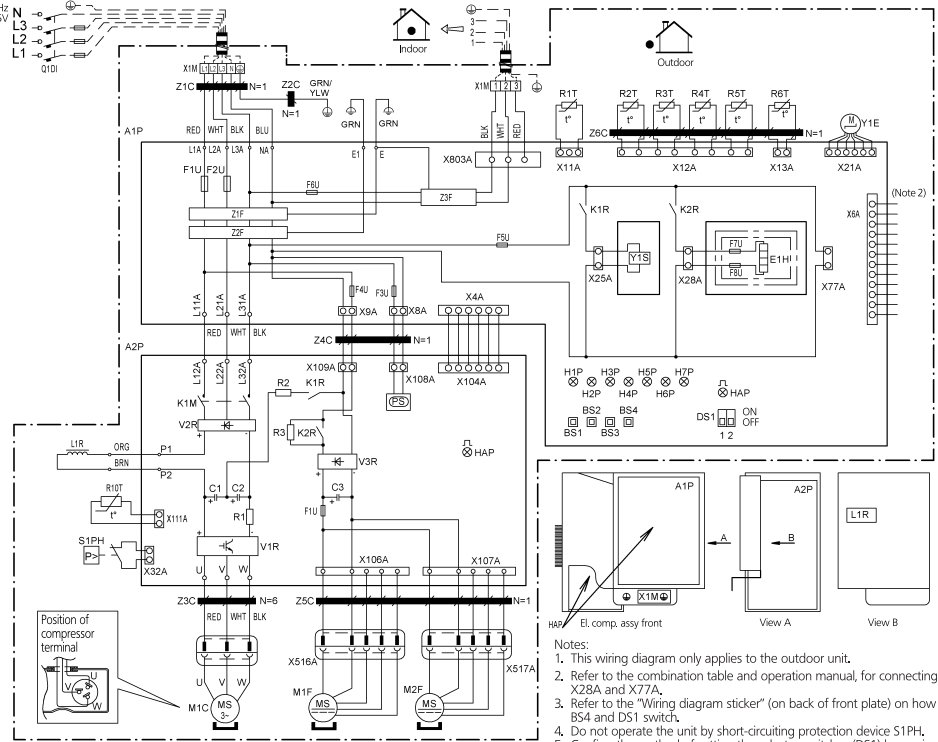
Notes:
 1. This wiring diagram only applies to the outdoor unit.
 2. Refer to the combination table and operation manual, for connecting wiring X6A, X28A and X77A.
 3. Refer to the "Wiring diagram sticker" (on back of front plate) on how to use BS1-BS4 and DS1 switch.
 4. Do not operate the unit by short-circuiting protection device S1PH.
 5. Confirm the method of setting the selector switches (DS1) by service manual. Factory setting of all switches: "OFF".
 6. only for Z11 class

2D080114B

AZQS140BY1

- A1P : Printed circuit board
- A2P : Printed circuit board (inverter)
- BS1-BS2 : Push button switch
- C1-C3 : Capacitor
- DS1 : Dip switch
- E1H : Bottomplate heater (Option)
- F1U : Fuse (31.5A / 250V)
- F2U : Fuse (1.6A / 250V)
- F3U-F6U : Fuse (1.6A / 250V)
- F7U-F8U : Fuse (1.0A / 250V)
- F1U (A2P) : Fuse (F 5.0A / 250V)
- H1P-H7P : Light emitting diode (service monitor orange)
- HAP(A1P,A2P) : Light emitting diode (service monitor green)
- K1M : Magnetic contactor
- K1R (A1P) : Magnetic relay (Y1S)
- K1R (A2P) : Magnetic relay
- K2R (A1P) : Magnetic relay (E1H Option)
- K2R (A2P) : Magnetic relay
- L1R : Reactor
- M1C : Motor (compressor)
- M1F : Motor (fan) (upper)
- M2F : Motor (fan) (lower)
- M2F : Switching power supply
- PS : Earth leakage breaker (30mA)
- Q1D1 : Resistor
- R1-R3 : Resistor
- R1T : Thermistor (air)
- R2T : Thermistor (discharge)
- R3T : Thermistor (Suction)
- R4T : Thermistor (Heat exchanger)
- R5T : Thermistor (heat exchanger middle)
- R6T : Thermistor (liquid)
- R6T : Thermistor (fin)
- R10T : Thermistor (fin)
- S1PH : Pressure switch (High)
- V1R : IGBT Power module
- V2R,V3R : Diode module
- X6A : Connector (Option)
- X1M : Terminal strip
- Y1E : Electronic expansion valve
- Y1S : Solenoid valve (4 way valve)
- Z1C-Z2C : Noise filter (ferite core)
- Z1F-Z3F : Noise filter

- L: Live
 - N: Neutral
 - Field wiring
 - Protective earth (screw)
 - Noiseless earth
 - Terminal
 - Connection
 - Terminal strip
 - Connector
 - Relay connector
 - Option
- BLK: Black
BLU: Blue
BRN: Brown
GRN: Green
ORG: Orange
RED: Red
WHT: White
YLW: Yellow

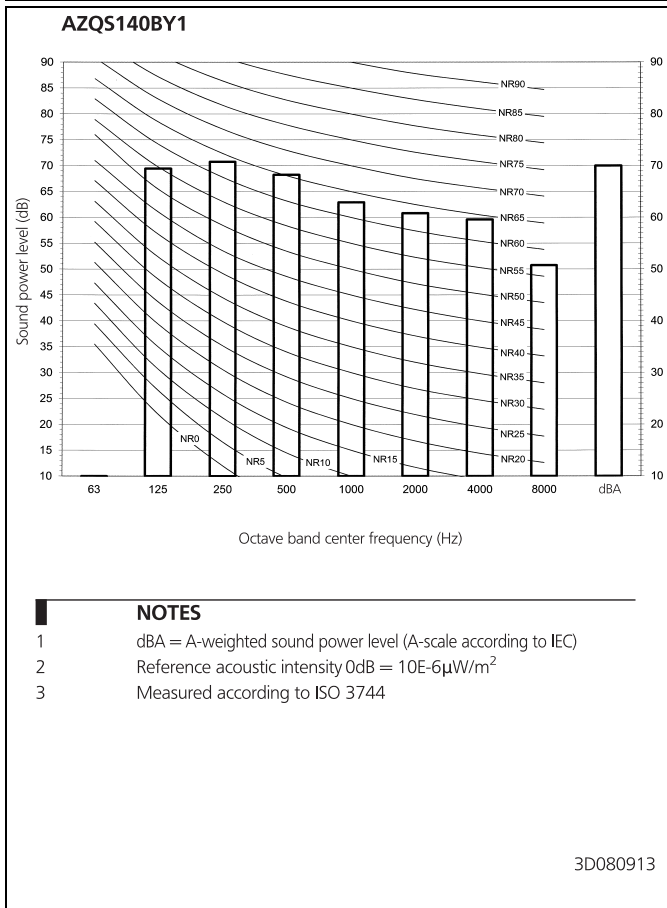
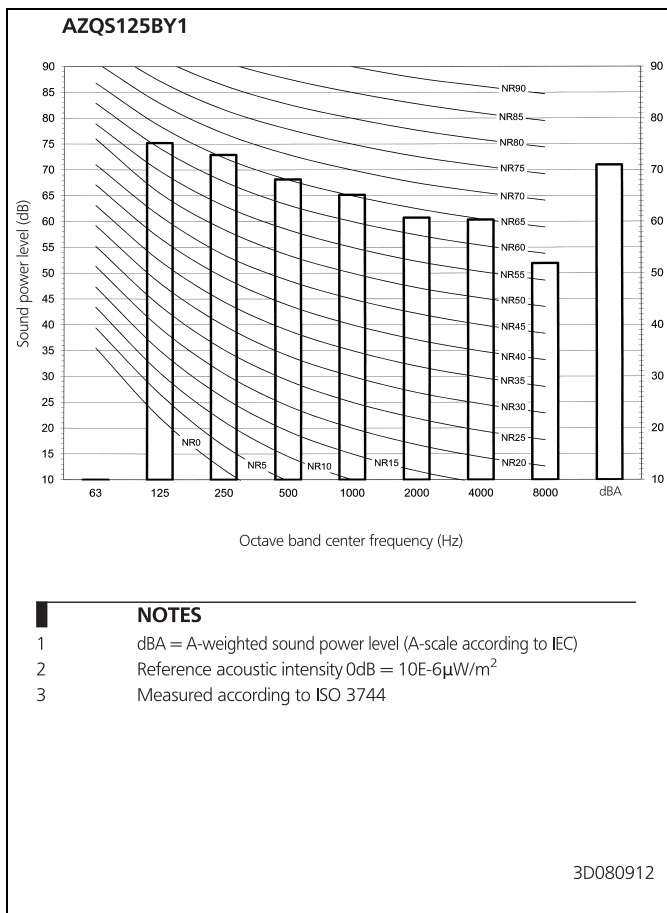
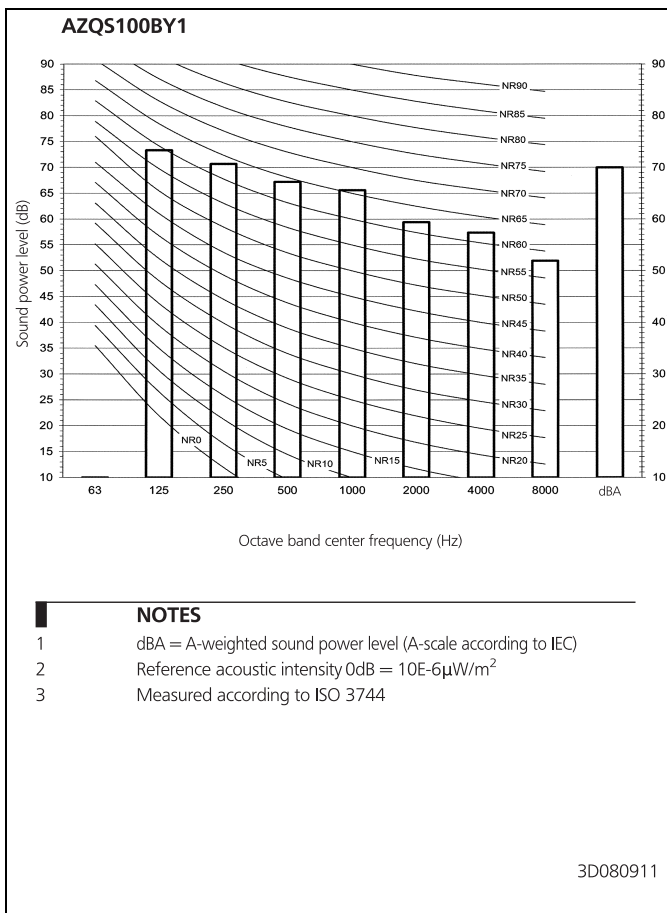


Notes:
 1. This wiring diagram only applies to the outdoor unit.
 2. Refer to the combination table and operation manual, for connecting wiring X6A, X28A and X77A.
 3. Refer to the "Wiring diagram sticker" (on back of front plate) on how to use BS1-BS4 and DS1 switch.
 4. Do not operate the unit by short-circuiting protection device S1PH.
 5. Confirm the method of setting the selector switches (DS1) by service manual. Factory setting of all switches: "OFF".

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11 Sound data

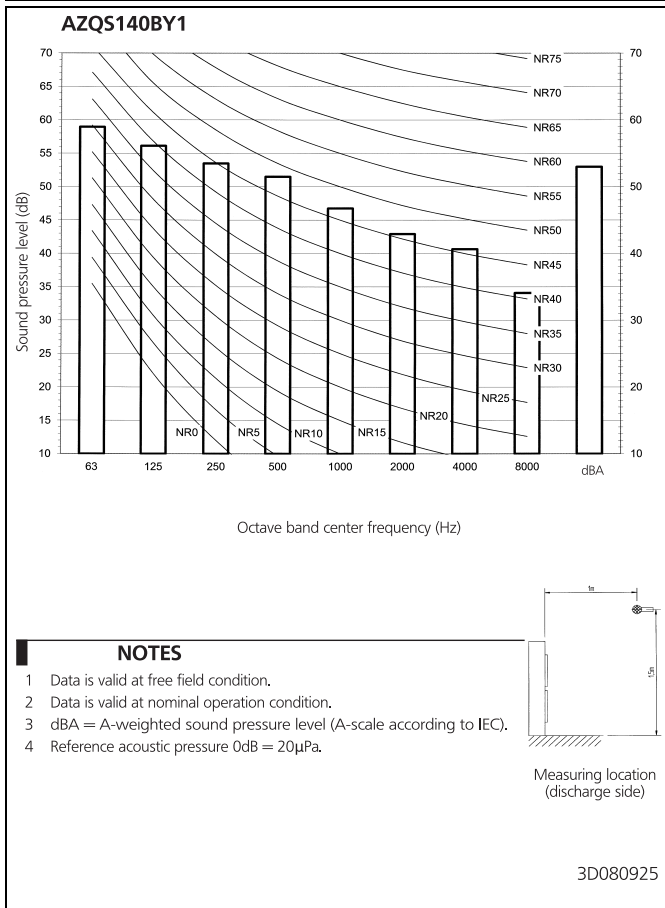
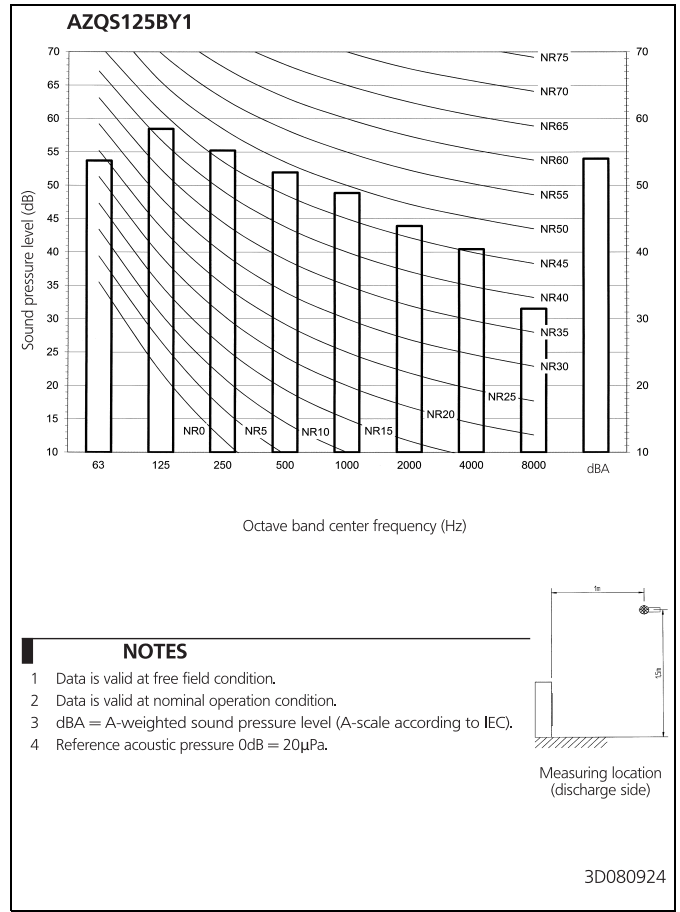
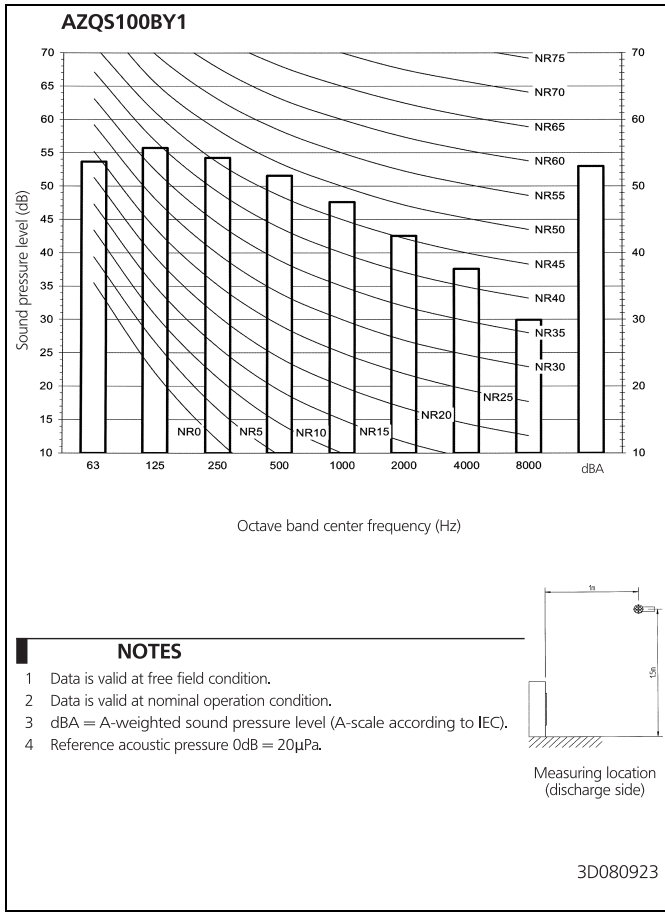
11 - 1 Sound Power Spectrum



11 Sound data

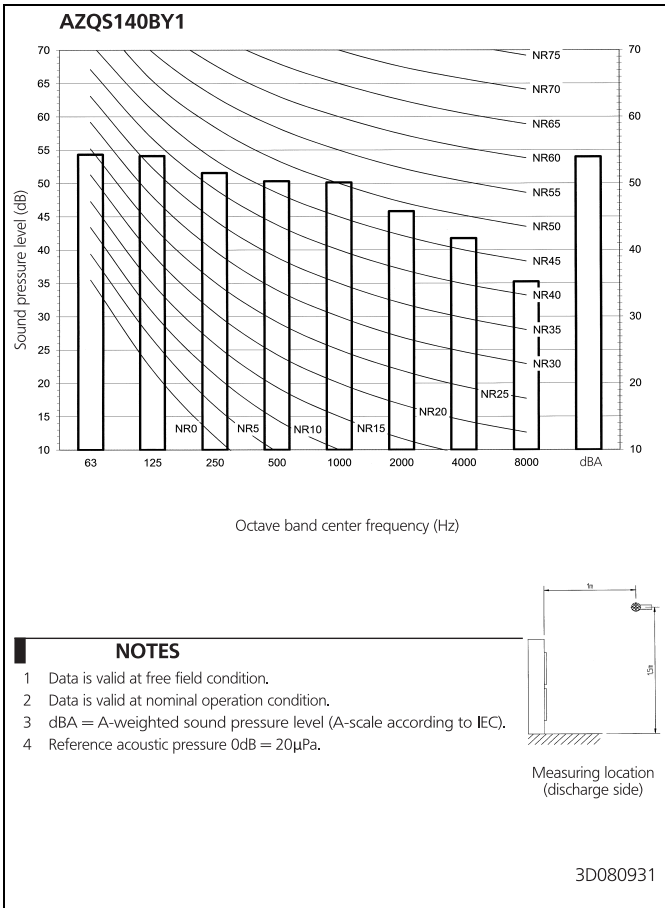
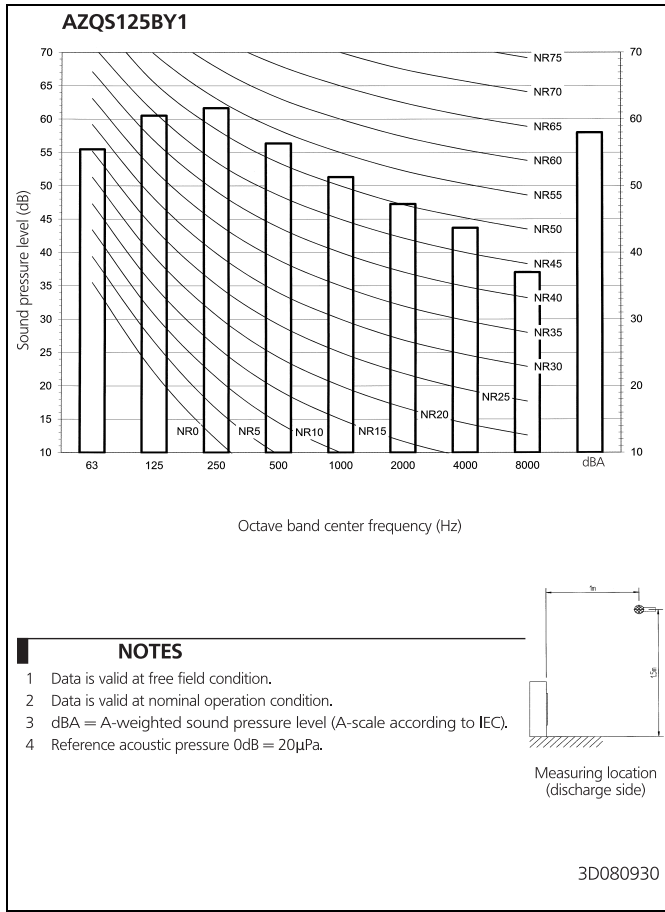
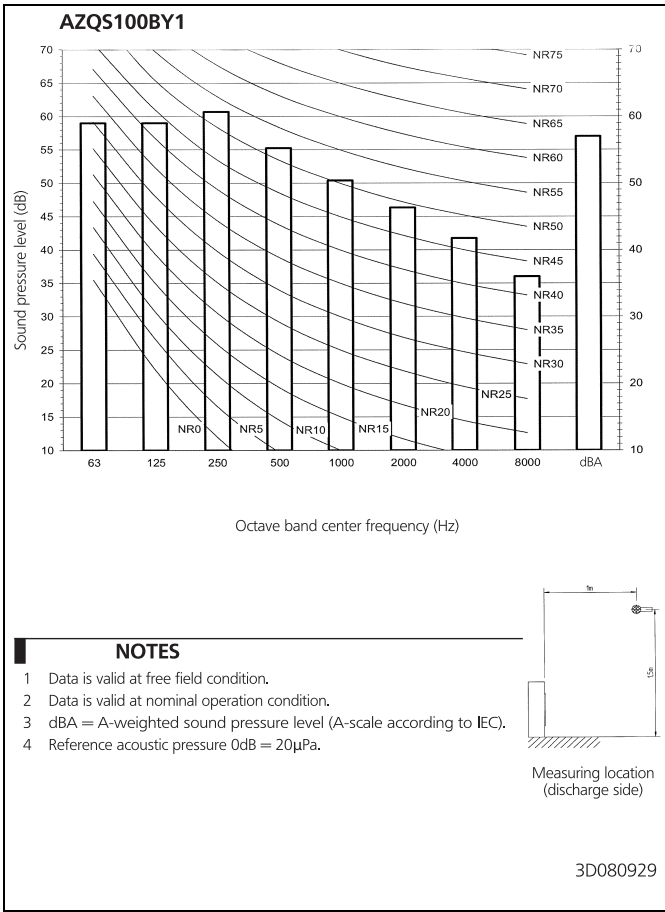
11 - 2 Sound Pressure Spectrum - Cooling

11



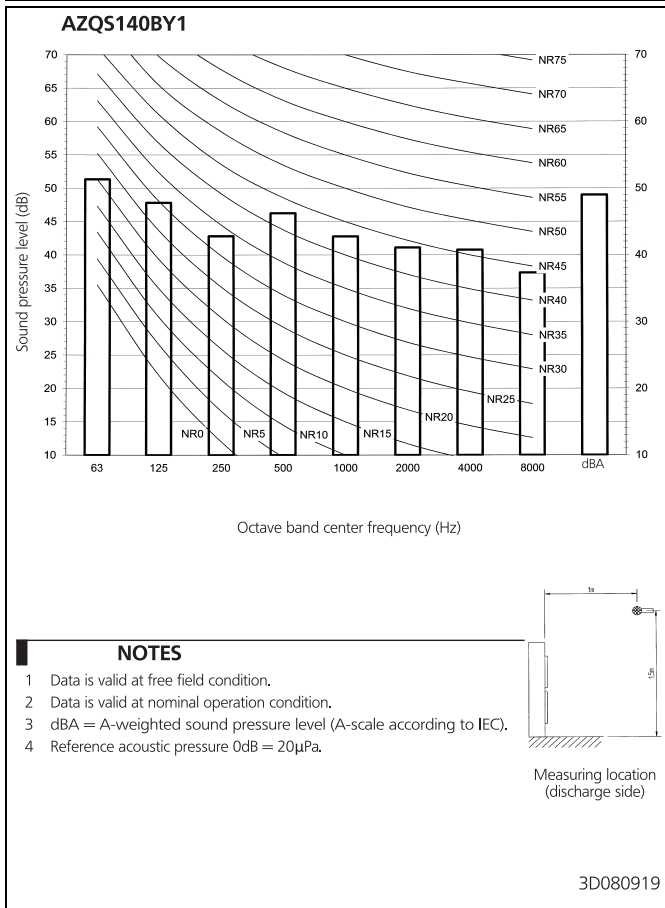
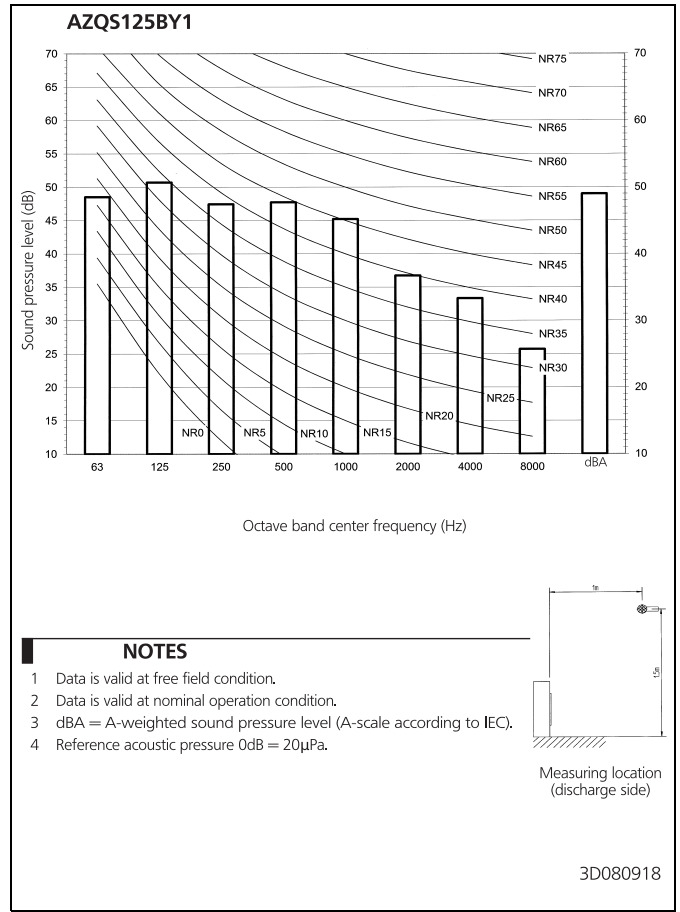
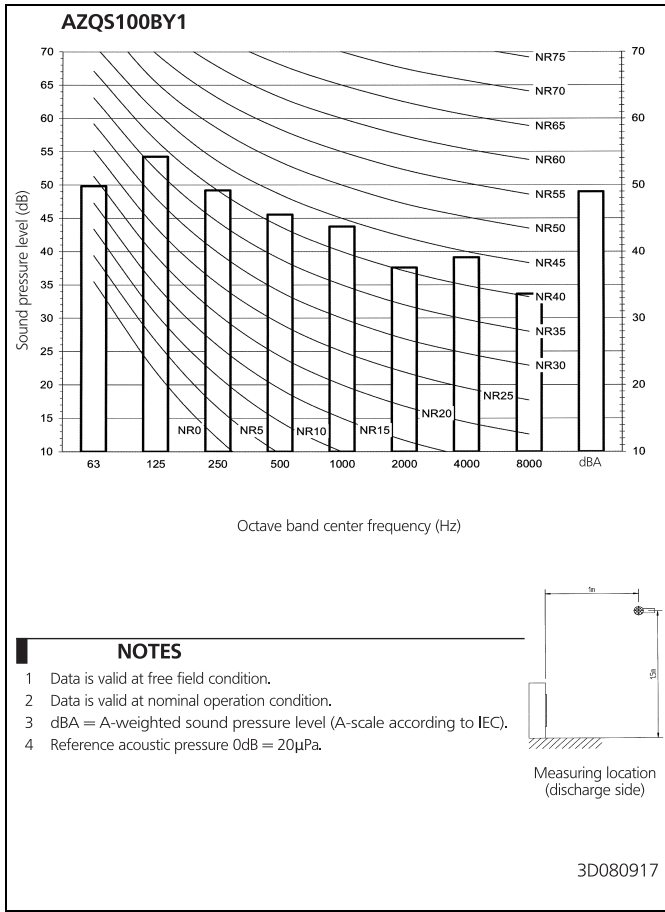
11 Sound data

11 - 3 Sound Pressure Spectrum - Heating



11 Sound data

11 - 4 Sound Pressure Spectrum Quiet Mode



12 Installation

12 - 1 Installation Method

AZQS-BV1 AZQS-BY1

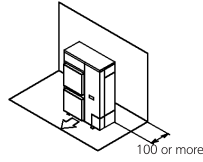
Installation service space

The measure of these values is "mm".

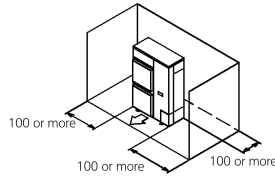
(A) When there are obstacles on suction sides.

• No obstacle above

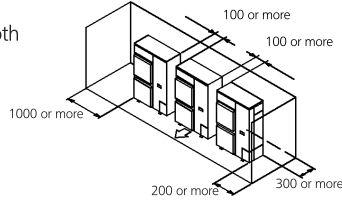
- ① Stand-alone installation
 - Obstacle on the suction side only



- Obstacle on both sides and suction side, too

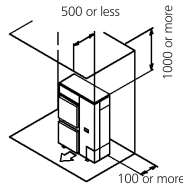


- ② Series installation (2 or more) (Note 1)
 - Obstacle on the suction side and both sides

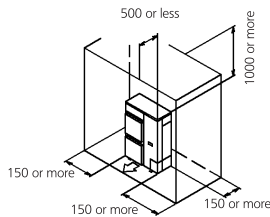


• Obstacle above, too.

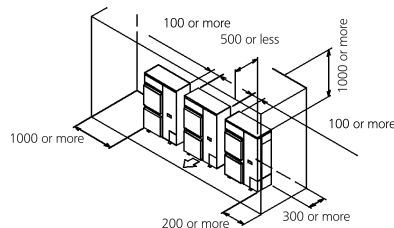
- ① Stand-alone installation
 - Obstacle on the suction side, too



- Obstacle on both sides and suction side, too



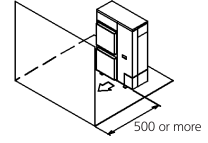
- ② Series installation (2 or more) (Note 1)
 - Obstacle on the suction side and both sides



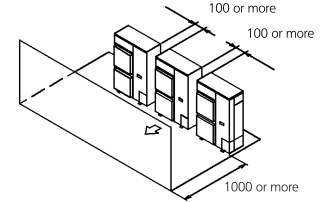
(B) When there are obstacles on discharge sides.

• No obstacle above

- ① Stand-alone installation
 - Obstacle on the discharge side only

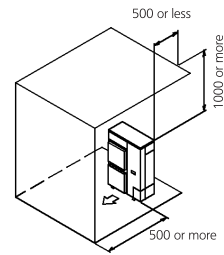


- ② Series installation (2 or more) (Note 1)
 - Obstacle on the discharge side only

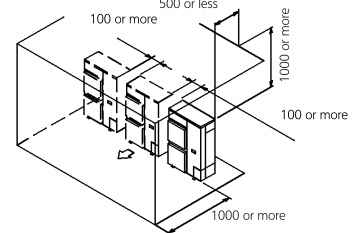


• Obstacle above, too

- ① Stand-alone installation
 - Obstacle on the discharge side only, too



- ② Series installation (2 or more) (Note 1)
 - Obstacle on the discharge side



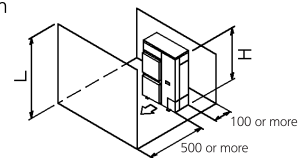
(C) When there are obstacles on both suction and discharge sides.:

Pattern 1

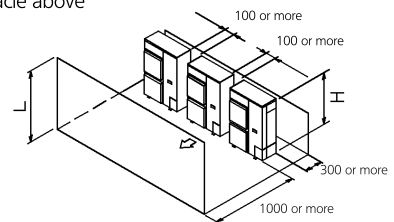
When the obstacles on the discharge side is higher than the unit. (L>H)
(There is no limit for the height of obstructions on the suction side.)

• No obstacle above

- ① Stand-alone installation
 - No obstacle above



- ② Series installation (2 or more) (Note 1)
 - No obstacle above



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12 Installation

12 - 1 Installation Method

12

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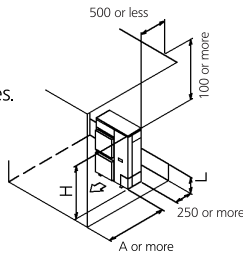
● Obstacle above, too

① Stand-alone installation (Note 2)

- When there are obstacles on suction, discharge and top sides.

The relations between H, A and L are as follows.

	L	A
$L \leq H$	$L \leq 1/2 H$	750 or more
	$1/2 H < L \leq H$	1000 or more
$L > H$	Set the stand as : $L \leq H$ Refer to the column of $L \leq H$ for A	



② Series installation (2 or more) (Note 1, 2)

- When there are obstacles on suction, discharge and top sides.

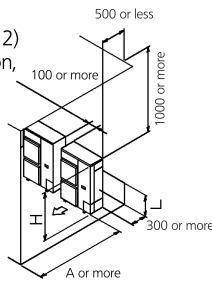
The relations between H, A and L are as follows.

	L	A
$L \leq H$	$L \leq 1/2 H$	1000 or more
	$1/2 H < L \leq H$	1250 or more
$L > H$	Set the stand as : $L \leq H$ Refer to the column of $L \leq H$ for A	

Limit of series installation is 2 units.

Pattern 2

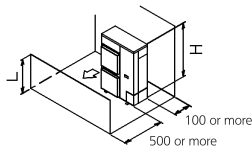
When the obstacle on the discharge side is lower than the unit ($L \leq H$) (There is no limit for the height of obstructions on the suction side.)



● No obstacle above

① Stand-alone installation

- No obstacle above

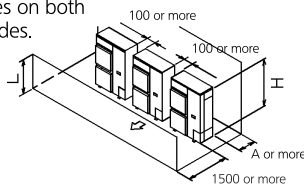


② Series installation (2 or more) (Note 1, 2)

- When there are obstacles on both suction and discharge sides.

The relations between H, A and L are as follows.

L	A
$L \leq 1/2 H$	250 or more
$1/2 H < L \leq H$	300 or more



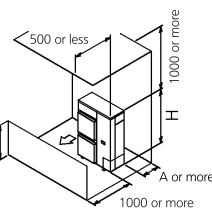
● obstacle above

① Stand-alone installation (Note 2)

- When there are obstacles on suction, discharge and top sides.

The relations between H, A and L are as follows.

	L	A
$L \leq H$	$L \leq 1/2 H$	100 or more
	$1/2 H < L \leq H$	200 or more
$L > H$	Set the stand as : $L \leq H$ Refer to the column of $L \leq H$ for A	



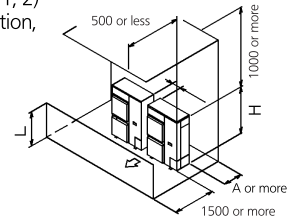
② Series installation (2 or more) (Note 1, 2)

- When there are obstacles on suction, discharge and top sides.

The relations between H, A and L are as follows.

	L	A
$L \leq H$	$L \leq 1/2 H$	250 or more
	$1/2 H < L \leq H$	300 or more
$L > H$	Set the stand as : $L \leq H$ Refer to the column of $L \leq H$ for A	

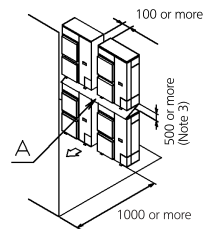
Limit of series installation is 2 units.



(D) Double-decker installation

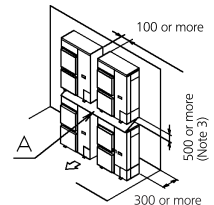
① Obstacle on the discharge side. (1)

- Do not exceed two levels for stacked installation.
- Install a roof cover similar to A (field supply), as outdoor units with downward drainage are prone to dripping and freezing.
- Install the upper-level outdoor unit so that its bottom plate is a sufficient height above the roof cover. This is to prevent the buildup of ice on the underside of the bottom plate.



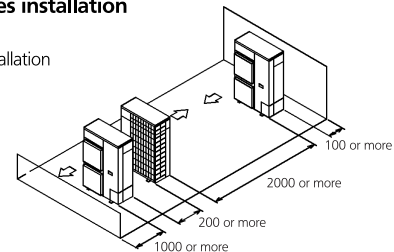
② Obstacle on the suction side. (1)

- Do not exceed two levels for stacked installation.
- Install a roof cover similar to A (field supply), as outdoor units with downward drainage are prone to dripping and freezing.
- Install the upper-level outdoor unit so that its bottom plate is a sufficient height above the roof cover. This is to prevent the buildup of ice on the underside of the bottom plate.



(E) Multiple rows of series installation (on the rooftop, etc.)

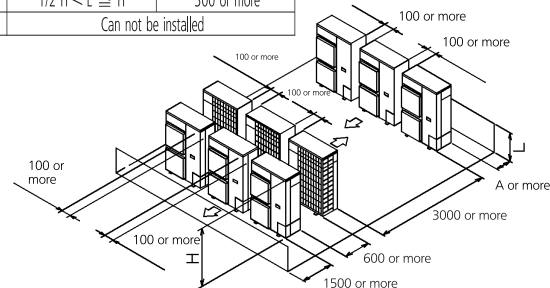
① One row of stand-alone installation



② Rows of series installation (2 or more)

The relations between H, A and L are as follows.

	L	A
$L \leq H$	$L \leq 1/2 H$	250 or more
	$1/2 H < L \leq H$	300 or more
$L > H$	Can not be installed	



NOTES

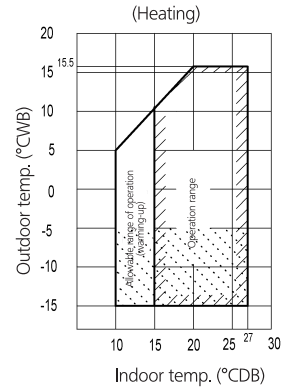
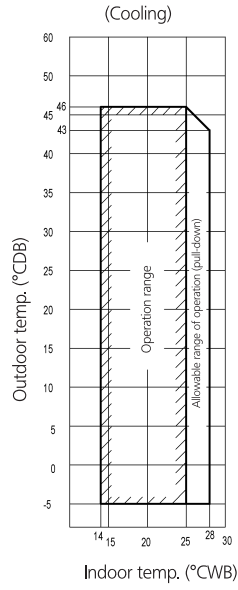
- 1 In case of the sideways piping, make a 100mm gap between the unit above.
- 2 Close the bottom of the installation frame to prevent the discharged air from being bypassed.
- 3 It is not necessary to install a roof cover if there is no danger of drainage dripping and freezing. In this case, the space between the upper and lower outdoor units should be at least 100mm. Close off the gap between the upper and lower units so there is no re-intake of discharged air.

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13 Operation range

13 - 1 Operation Range

AZQS-BY1



Notes:

- 1 Depending on operation and installation conditions, the indoor unit can change over to freeze-up operation (indoor de-icing).
- 2 To reduce the freeze-up operation (indoor de-icing) frequency, it is recommended to install the outdoor unit in a location not exposed to wind.
- 3 In case of high humidity conditions (>92%) in this operation area, an RZQG model should be used instead of an RZQSG model. This to avoid freeze-up of the outdoor unit.

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