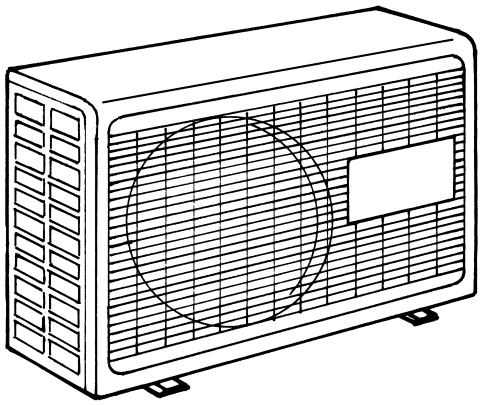
TECHNICAL DATA
& SERVICE MANUAL

OUTDOOR UNIT: AER608SH
AER609SH
AER612SH

SPLIT SYSTEM AIR CONDITIONER

Model No.	Product Code No.
AER608SH	387007130
AER609SH	387007131
AER612SH	387007132



0.8180.261.0 05/2002

IMPORTANT!
Please read before installation

This air conditioning system meets strict safety and operating standards.
For the installer or service person, it is important to install or service the system so that it operates safely and efficiently.

For safe installation and trouble-free operation, you must:
- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.
- The unit must be supplied with a dedicated electrical line.

WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION

This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

If necessary, get help
These instructions are all you need for most installation sites and maintenance conditions.
If you require help for a special problem, contact our sale/service outlet or your certified dealer for additional instructions.

In case of improper installation
The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

SPECIAL PRECAUTIONS

- During installation, connect before the refrigerant system and then the wiring one; proceed in the reverse orden when removing the units.

WARNING **When wiring**

ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIANS SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked, to ensure the grounding.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring.
  Improper connections and inadequate grounding can cause **accidental injury and death**.
- **Ground the unit** following local electrical codes.
- The Yellow/Green wire cannot be used for any connection different from the ground connection.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.
- Do not allow wiring to touch the refrigerant tubing, compressor, or any moving parts of the fan.
- Do not use multi-core cable when wiring the power supply and control lines. Use separate cables for each type of line.

When transporting
Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminium fins on the air conditioner can cut your fingers.

When installing...
... In a ceiling or wall
Make sure the ceiling/wall is strong enough to hold the unit-weight. It may be necessary to build a strong wooden or metal frame to provide added support.

... In a room
Properly insulate any tubing run inside a room to prevent "sweating", which can cause dripping and water damage to walls and floors.

... In moist or uneven locations
Use a raised concrete base to provide a solid level foundation for the outdoor unit.
This prevents damage and abnormal vibrations.

... In area with strong winds
Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

... In a snowy area (for heat pump-type systems)
Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

When connecting refrigerant tubing
- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- Apply refrigerant lubricant to the matching surfaces of the flare and union tubes before connecting them; screw by hand and then tighten the nut with a torque wrench for a leak-free connection.
- Check carefully for leaks before starting the test run.

NOTE:
Depending on the system type, liquid and gas lines may be either narrow or wide. Therefore, to avoid confusion, the refrigerant tubing for your particular model is specified as narrow tube for liquid, wide tube for gas.

When servicing
- Turn the power OFF at the main power board before opening the unit to check or repair electrical parts and wiring.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site after the work, remembering to check that no metal scraps or bits of wiring have been left inside the unit being serviced.
- Ventilate the room during the installation or testng the refrigeration system; make sure that, after the installation, no gas leaks are present, because this could produce toxic gas and dangerous if in contact with flames or heat-sources.

Table of Contents

1. OPERATING RANGE

	Temperature	Indoor Air Intake Temp.	Outdoor Air Intake Temp.
Cooling	Maximum	32°C D.B. / 23°C W.B.	43°C D.B.
	Minimum	19°C D.B. / 14°C W.B.	19°C D.B.
Heating	Maximum	27°C D.B.	24°C D.B. / 18°C W.B.
	Minimum	-	-8°C D.B. / -9°C W.B.

2. SPECIFICATIONS

2-1 Unit Specifications

AER608SH

Power source	220 - 240V ~ 50Hz

Voltage rating	230V

Performance *	**AWR608HL**		Cooling	Heating
Capacity		kW	2,30	2.65
		BTU/h	7843	9045
Air circulation (High)		m³/h	430	
Moisture removal (High)		Liters/h	0,9	-

Electrical Rating		Cooling	Heating
Available voltage range	V	198 ~ 264	
Running amperes	A	4.0	4.0
Power input	W	890	860
Power factor	%	97	94
C.O.P.	W/W	2.6	3.1
Compressor locked rotor amperes	A	20	20

Features				
Fan speed			1(Hi)	
Compressor			Rotary (Hermetic)	
Refrigerant / Amount charged at shipment		g	R407C / 770	
Refrigerant control			Capillary tube	
Operation Sound	Hi	dB-A	43	45
Refrigerant tubing connections			Flare type	
Max. allowable tubing length at shipment		m	7.5	
Refrigerant	Narrow tube	mm(in.)	6,35 (1/4)	
tube diameter	Wide tube	mm(in.)	9,52 (3/8)	

Dimensions & Weight			
Unit dimensions	Height	mm	540
	Width	mm	700
	Depth	mm	265
Package dimensions	Height	mm	568
	Width	mm	815
	Depth	mm	343
Weight	Net	kg	35.0
	Shipping	kg	38.0
Shipping volume		m^3	0.16

DATA SUBJECT TO CHANGE WITHOUT NOTICE

Remarks:

Rating conditions are:

Cooling: Indoor air temperature 27°C D.B. / 19°C W.B.
Outdoor air temperature 35°C D.B. / 24°C W.B.

Heating: Indoor air temperature 20°C D.B.
Outdoor air temperature 7°C D.B. / 6°C W.B.

* For other INDOOR UNITS' MODELS, please refer to catalogue

AER609SH

Power source	220 - 240V ~ 50Hz

Voltage rating	230V

Performance *	**AWR609HL**		Cooling	Heating
Capacity		kW	2,50	3.40
		BTU/h	8532	11604
Air circulation (High)		m^3/h	450	
Moisture removal (High)		Liters/h	1.1	-

Electrical Rating		Cooling	Heating
Available voltage range	V	198 ~ 264	
Running amperes	A	4.7	4.7
Power input	W	1040	1050
Power factor	%	96	97
C.O.P.	W/W	2.4	3.2
Compressor locked rotor amperes	A	24	24

Features				
Fan speed			1(Hi)	
Compressor			Rotary (Hermetic)	
Refrigerant / Amount charged at shipment		g	R407C / 990	
Refrigerant control			Capillary tube	
Operation Sound	Hi	dB-A	43	45
Refrigerant tubing connections			Flare type	
Max. allowable tubing length at shipment		m	7.5	
Refrigerant	Narrow tube	mm(in.)	6,35 (1/4)	
tube diameter	Wide tube	mm(in.)	9,52 (3/8)	

Dimensions & Weight			
Unit dimensions	Height	mm	540
	Width	mm	700
	Depth	mm	265
Package dimensions	Height	mm	568
	Width	mm	815
	Depth	mm	343
Weight	Net	kg	35.0
	Shipping	kg	38.0
Shipping volume		m^3	0.16

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Outdoor air temperature 7°C D.B. / 6°C W.B.

* For other INDOOR UNITS' MODELS, please refer to catalogue

AER612SH

Power source	220 - 240V ~ 50Hz

Voltage rating	230V

Performance *	**AWR612HL**		Cooling	Heating
Capacity		kW	3,10	4.10
		BTU/h	10580	13993
Air circulation (High)		m^3/h	470	
Moisture removal (High)		Liters/h	1.5	-

Electrical Rating		Cooling	Heating
Available voltage range	V	198 ~ 264	
Running amperes	A	6.2	6.6
Power input	W	1300	1400
Power factor	%	91	92
C.O.P.	W/W	2.4	2.9
Compressor locked rotor amperes	A	33	33

Features			
Fan speed			1(Hi)
Compressor			Rotary (Hermetic)
Refrigerant / Amount charged at shipment		g	R407C / 1150
Refrigerant control			Capillary tube
Operation Sound	Hi	dB-A	45 / 47
Refrigerant tubing connections			Flare type
Max. allowable tubing length at shipment		m	7.5
Refrigerant	Narrow tube	mm(in.)	6,35 (1/4)
tube diameter	Wide tube	mm(in.)	12,7 (1/2)

Dimensions & Weight			
Unit dimensions	Height	mm	540
	Width	mm	700
	Depth	mm	265
Package dimensions	Height	mm	568
	Width	mm	815
	Depth	mm	343
Weight	Net	kg	35.0
	Shipping	kg	38.0
Shipping volume		m^3	0.16

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Remarks:

Rating conditions are:

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Outdoor air temperature 35°C D.B. / 24°C W.B.

Heating: Indoor air temperature 20°C D.B.
Outdoor air temperature 7°C D.B. / 6°C W.B.

* For other INDOOR UNITS' MODELS, please refer to catalogue

2-2 Major Component Specifications

Outdoor Unit: **AER608SH**

Compressor				
Type				Rotary (Hermetic)
Compressor model				80225245F C-RN75H5A
Nominal output			W	750
Compressor oil…Amount			cc.	FV68S…470
Coil resistance (Ambient temp. 25°C)			Ω	C-R: 3.38 C-S: 7.49
Overload relay				External (OLR T)
Safety devices	Type			CS-7C115
	Operating Temp.	Open	°C	115 ± 3
		Close	°C	95 ± 5
Run capacitor			μF	20
			VAC	400

Fan & Fan Motor				
Type				Propeller
Q'ty ……. Dia.				1…. Ø 370
Fan motor model…Q'ty				UE6-21ST5P…1
No. Of poles…rpm (230 V, High)				6…832
Nominal output			W	25.05
Coil resistance (Ambient temp. 25 °C)			Ω	BRN-WHT: 242.4 WHT-YEL: 408.1
Safety devices	Type			Thermal protector
	Operating temp.	Open	°C	130 ± 5
		Close	°C	83 ± 15
Run capacitor			μF	1.5
			VAC	450

Heat Exch. Coil		
Coil		Aluminium plate fin / Copper tube
Rows		1
Fin pitch	mm	1.3
Face area	m^2	0.353

External Finish	Acrylic baked-on enamel finish

DATA SUBJECT TO CHANGE WITHOUT NOTICE

Outdoor Unit: **AER609SH**

Compressor				
Type				Rotary (Hermetic)
Compressor model				80228345 C-RN90H5B
Nominal output			W	900
Compressor oil…Amount			cc.	FV68S…470
Coil resistance (Ambient temp. 25°C)			Ω	C-R: 3.07 C-S: 6.69
Overload relay				External (OLR T)
Safety devices	Type			CS-7C115
	Operating Temp.	Open	°C	115 ± 3
		Close	°C	95 ± 5
Run capacitor			μF	25
			VAC	400

Fan & Fan Motor				
Type				Propeller
Q'ty ……. Dia.				1…. Ø 370
Fan motor model…Q'ty				UE6-21ST5P…1
No. Of poles…rpm (230 V, High)				6…832
Nominal output			W	25.05
Coil resistance (Ambient temp. 25 °C)			Ω	BRN-WHT: 242.4 WHT-YEL: 408.1
Safety devices	Type			Thermal protector
	Operating temp.	Open	°C	130 ± 5
		Close	°C	83 ± 15
Run capacitor			μF	1.5
			VAC	450

Heat Exch. Coil		
Coil		Aluminium plate fin / Copper tube
Rows		1
Fin pitch	mm	1.2
Face area	m^2	0.353

External Finish	Acrylic baked-on enamel finish

Outdoor Unit: **AER612SH**

Compressor					
Type					Rotary (Hermetic)
Compressor model					80235645B C-RN110H5B
Nominal output				W	1100
Compressor oil…Amount				cc.	FV68S…520
Coil resistance (Ambient temp. 25°C)				Ω	C-R: 1.962 C-S: 5.38
Overload relay					External (OLR T)
Safety devices	Type				CS-7C115
	Operating Temp.	Open		°C	115 ± 3
		Close		°C	95 ± 5
Run capacitor				μF	25
				VAC	400

Fan & Fan Motor				
Type				Propeller
Q'ty ……. Dia.				1…. Ø 370
Fan motor model…Q'ty				UE6-21ST5P…1
No. Of poles…rpm (230 V, High)				6…832
Nominal output			W	25.05
Coil resistance (Ambient temp. 25 °C)			Ω	BRN-WHT: 242.4 WHT-YEL: 408.1
Safety devices	Type			Thermal protector
	Operating temp.	Open	°C	130 ± 5
		Close	°C	83 ± 15
Run capacitor			μF	1.5
			VAC	450

Heat Exch. Coil		
Coil		Aluminium plate fin / Copper tube
Rows		2
Fin pitch	mm	1.4
Face area	m^2	0.333

External Finish	Acrylic baked-on enamel finish

2-3 Other Component Specifications

AER608SH

4-way Valve (20S)		SRF-01AJ504D1 (Coil) STF-0101Z (Valve)
Coil rating		AC 220/240 V, 50 Hz, 6W
Coil resistance	Ω (at 20°C)	1402 ± 7%

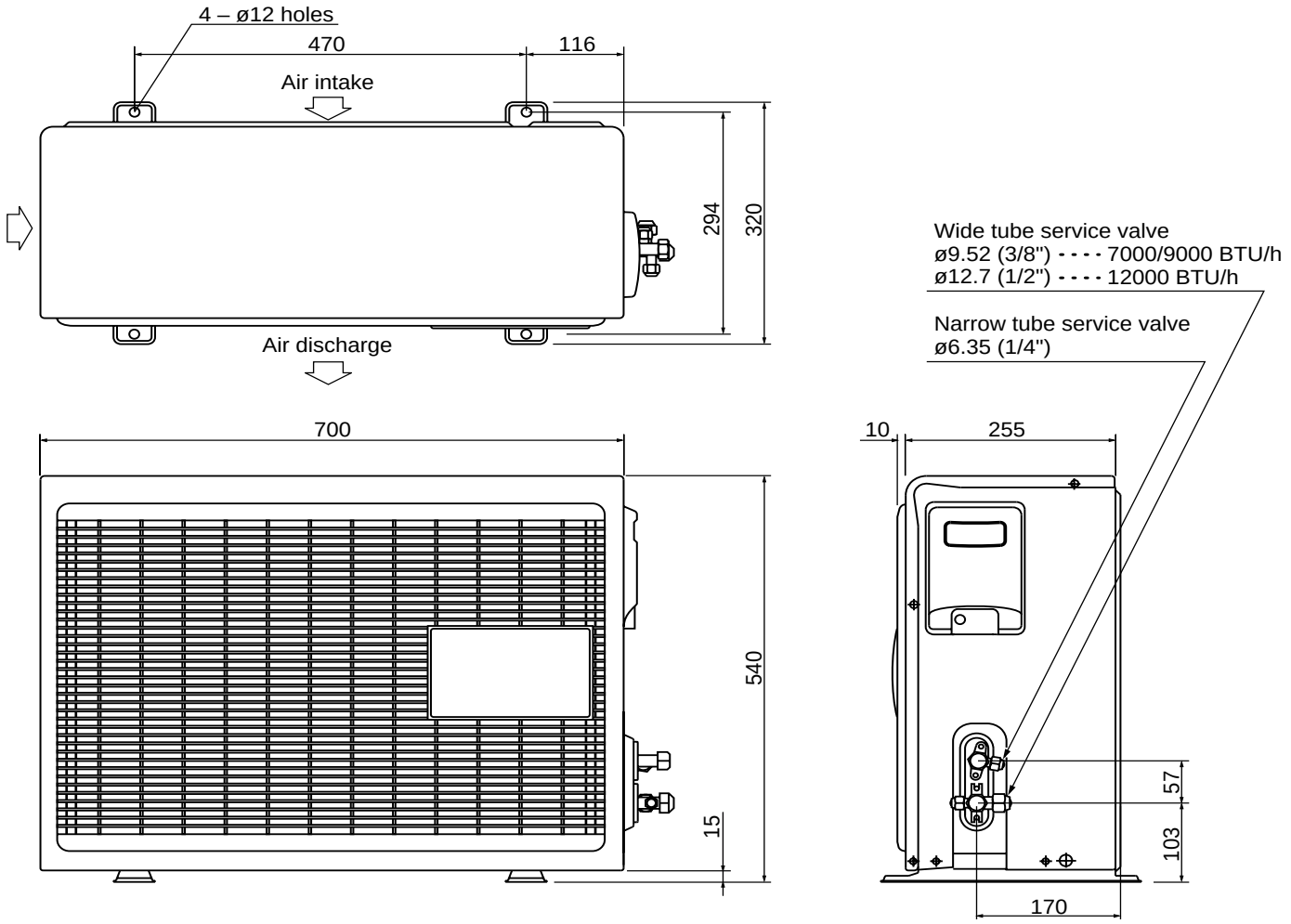
AER609SH

4-way Valve (20S)		SRF-01AJ504D1 (Coil) STF-0101Z (Valve)
Coil rating		AC 220/240 V, 50 Hz, 6W
Coil resistance	Ω (at 20°C)	1402 ± 7%

AER612SH

4-way Valve (20S)		SRF-01AJ504D1 (Coil) STF-0201Z (Valve)
Coil rating		AC 220/240 V, 50 Hz, 6W
Coil resistance	Ω (at 20°C)	1402 ± 7%

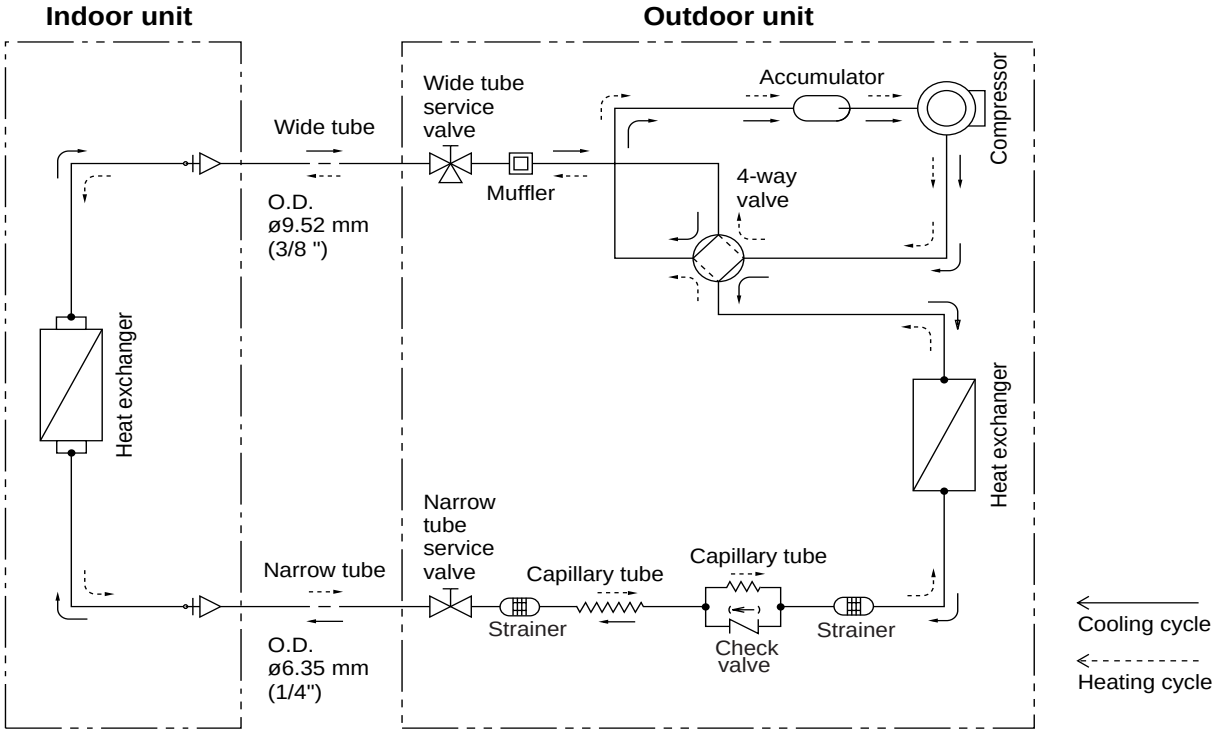
3. DIMENSIONAL DATA



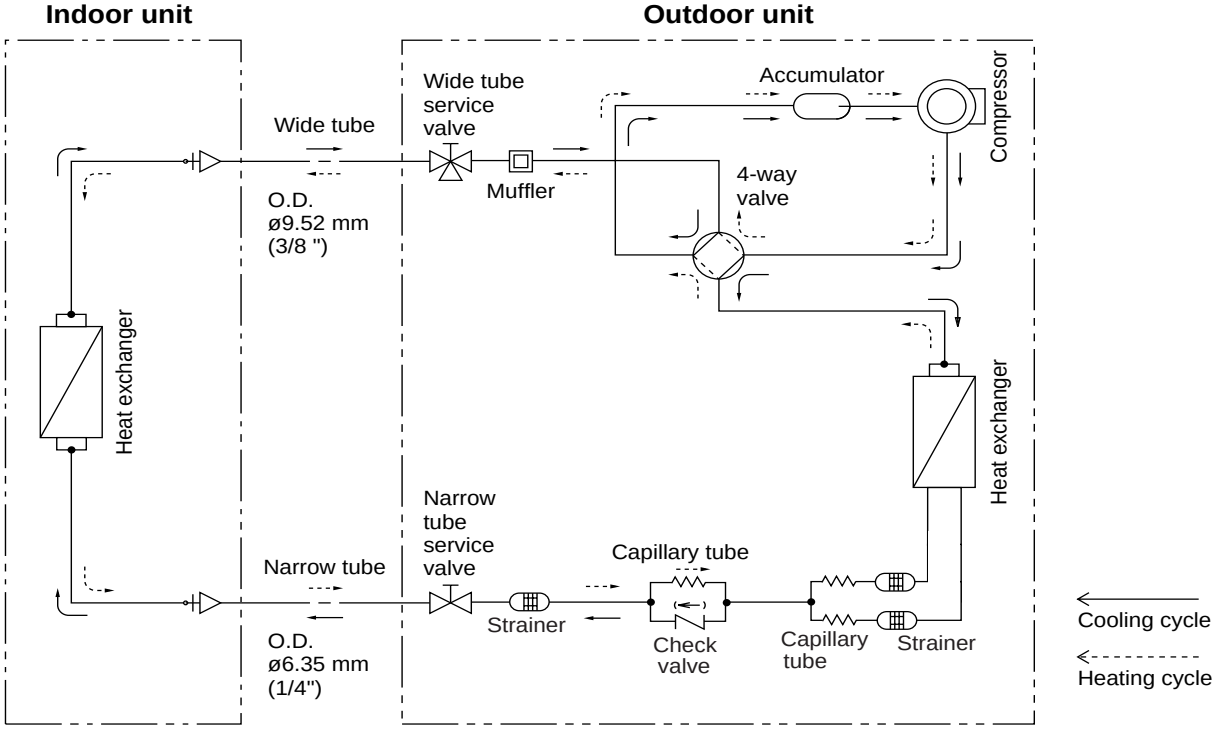
Unit : mm

4. REFRIGERANT FLOW DIAGRAM

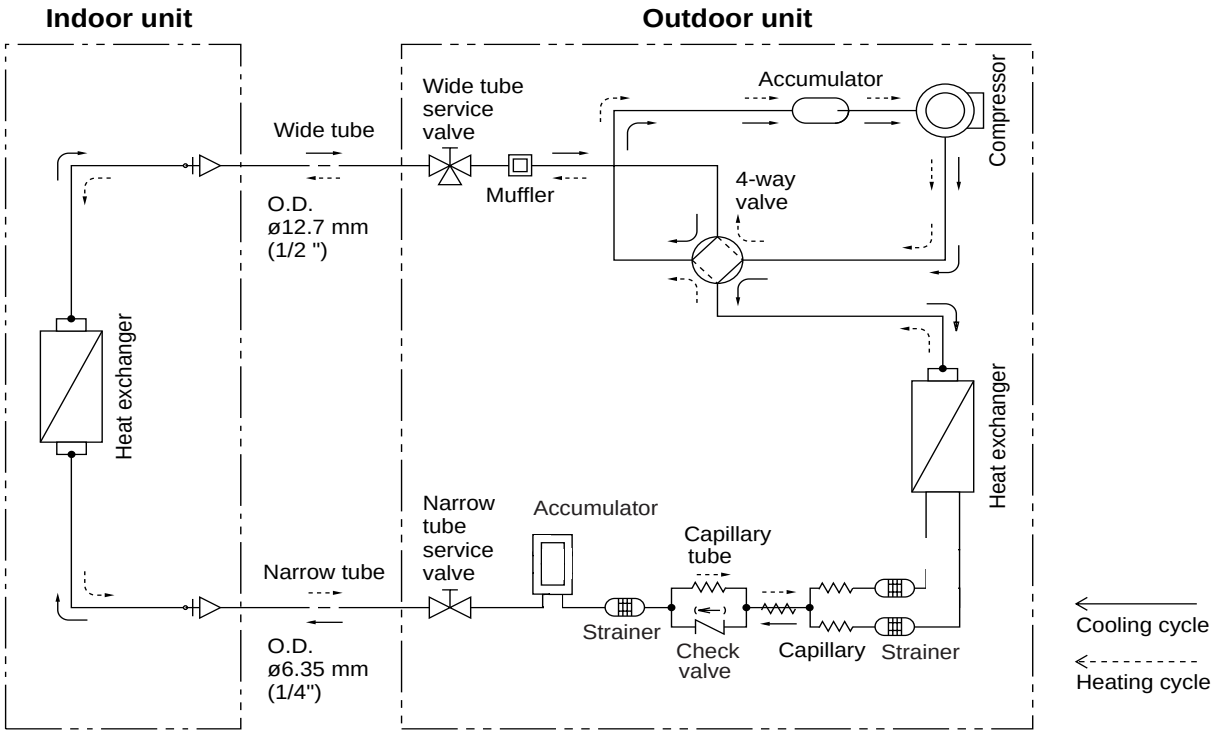
Indoor Unit: Outdoor Unit: **AER608SH**



Indoor Unit: Outdoor Unit: **AER609SH**



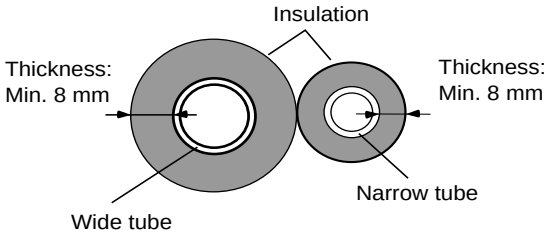
Indoor Unit: Outdoor Unit: **AER612SH**



Insulation of Refrigerant Tubing

IMPORTANT

Because capillary tubing is used in the outdoor unit, both the wide and narrow tubes of this air conditioner become cold. To prevent heat loss and wet floors due to dripping of condensation, **both tubes must be well insulated** with a proper insulation material. The thickness of the insulation should be a min. 8 mm.



CAUTION

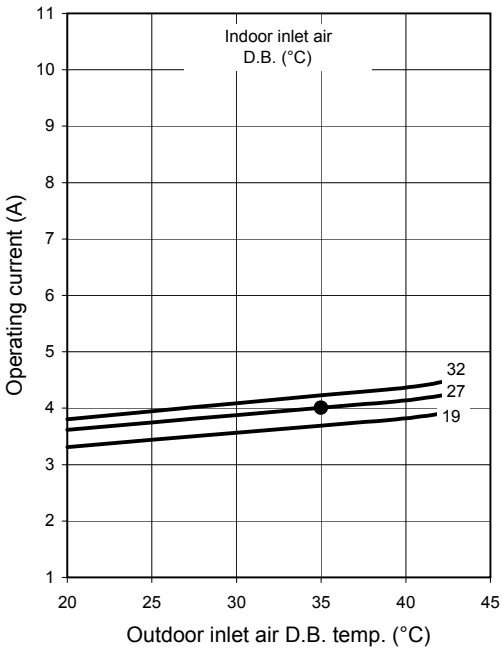
After a tube has been insulated, never try to bend it into a narrow curve because it can cause the tube to break or crack.

5. PERFORMANCE DATA

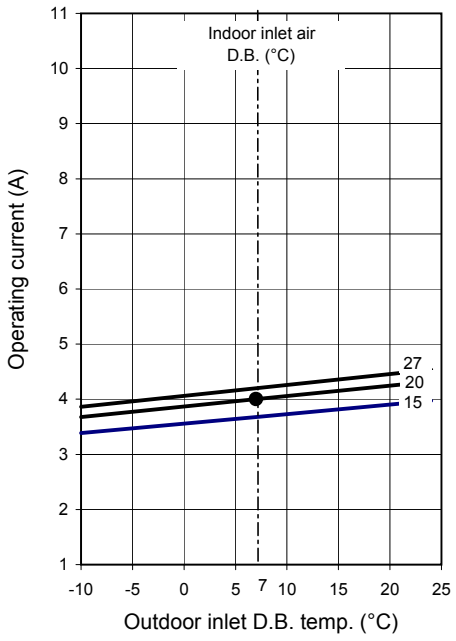
5-1 Performance charts

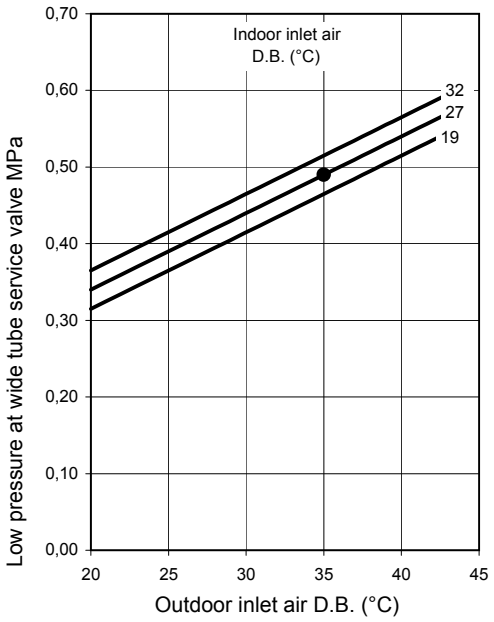
AER608SH

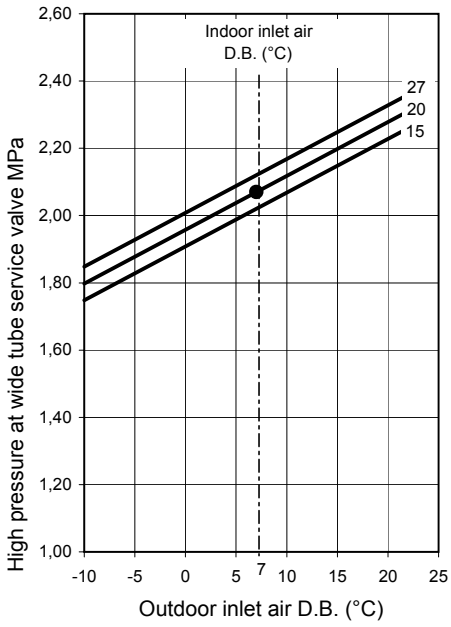
■ Cooling Characteristics



■ Heating Characteristics







Notes:

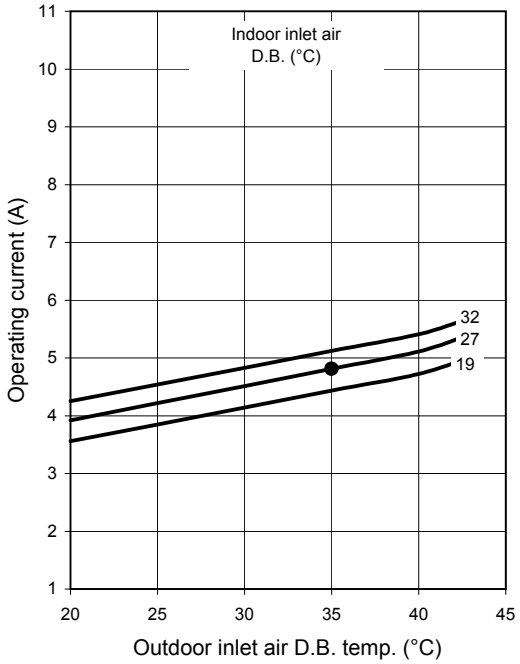
Overload prevention operates to protect the air conditioner when outdoor ambient temperature reaches extremely high values in heating mode.

● Points of Rating condition

Data referred to AWR608HL

AER609SH

■ Cooling Characteristics



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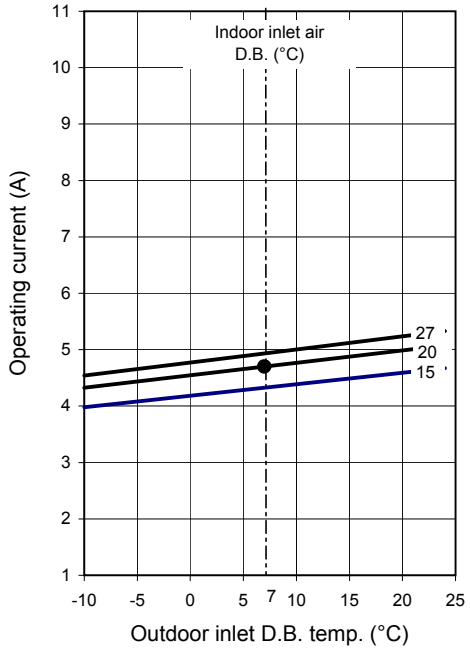

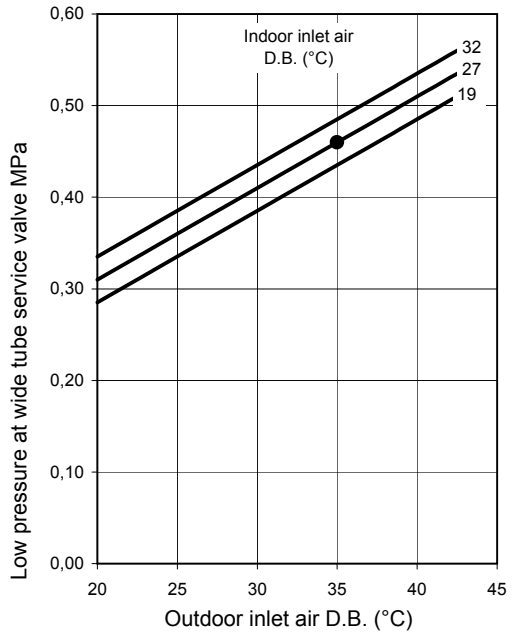

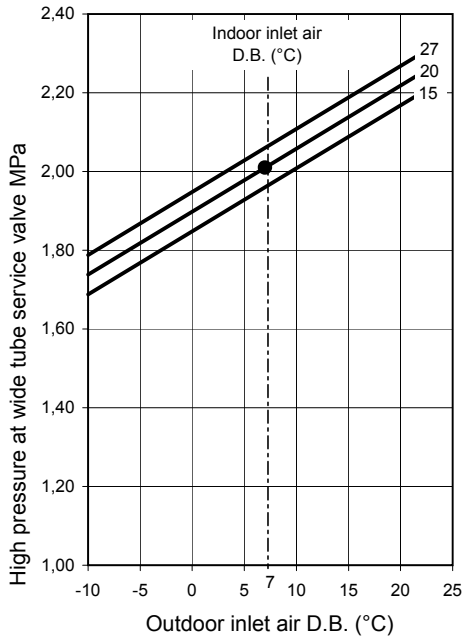

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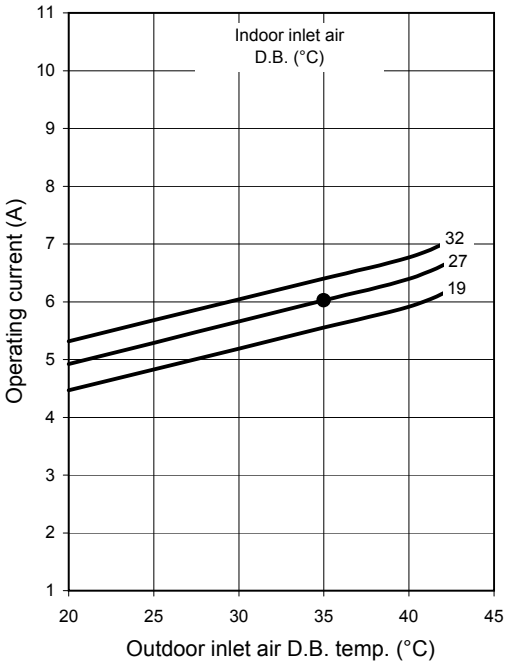
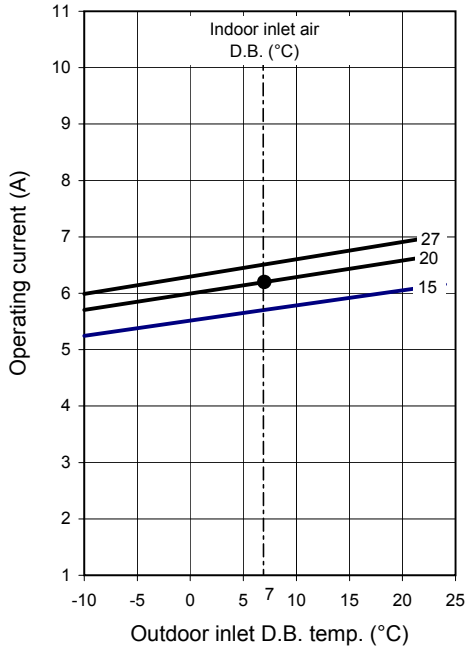
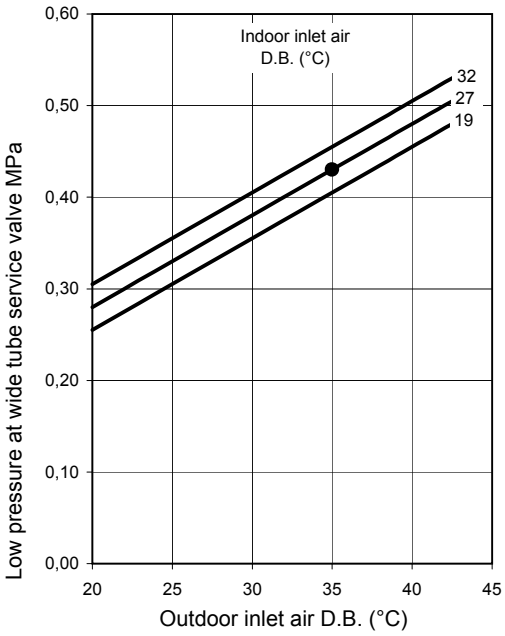
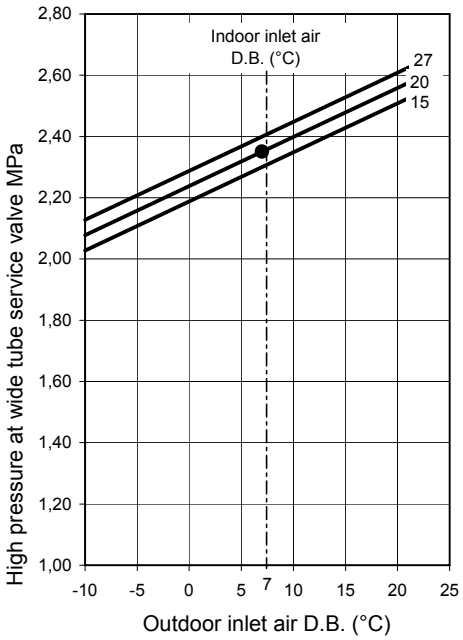


■ Heating Characteristics







Notes:

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● Points of Rating condition

Data referred to AWR612HL

5-2 Cooling Capacity

OUTDOOR UNIT: **AER608SH**
INDOOR UNIT: **AWR608HL**

220 - 240V ~ 50Hz

RATING CAPACITY			2,30 kW		moisture removal		0,9 l/h	
COMP. POWER INPUT			0,802 kW		max comp input		0,902 kW	
AIR FLOW RATE			430 m³/h					
EVAPORATOR		CONDENSER						
ENT.TEMP. °C		OUTDOOR AMBIENT TEMP. °C						
W.B.	D.B.		20	25	30	35	40	43
		TC	2,32	2,18	2,12	2,02	1,89	1,75
		CM	0,68	0,70	0,73	0,75	0,78	0,81
	21	SHC	1,61	1,49	1,47	1,42	1,36	1,29
	23	SHC	1,82	1,69	1,66	1,61	1,55	1,48
15	25	SHC	2,02	1,89	1,85	1,80	1,74	1,67
	27	SHC	2,23	2,09	2,05	2,00	1,89	1,75
	29	SHC	2,32	2,18	2,12	2,02	1,89	1,75
	31	SHC	2,32	2,18	2,12	2,02	1,89	1,75
		TC	2,49	2,36	2,27	2,16	2,03	1,87
		CM	0,70	0,73	0,75	0,78	0,80	0,83
	21	SHC	1,39	1,31	1,27	1,22	1,16	1,09
	23	SHC	1,60	1,50	1,46	1,41	1,35	1,28
17	25	SHC	1,81	1,70	1,66	1,61	1,55	1,47
	27	SHC	2,02	1,90	1,85	1,80	1,74	1,67
	29	SHC	2,23	2,10	2,04	1,99	1,93	1,86
	31	SHC	2,43	2,30	2,23	2,16	2,03	1,87
		TC	2,65	2,50	2,42	2,30	2,16	1,99
		CM	0,72	0,75	0,78	0,80	0,83	0,85
	21	SHC	1,17	1,10	1,06	1,01	0,95	0,88
	23	SHC	1,38	1,29	1,26	1,21	1,15	1,08
19	25	SHC	1,59	1,48	1,45	1,40	1,34	1,27
	27	SHC	1,79	1,67	1,64	1,67	1,53	1,46
	29	SHC	2,00	1,85	1,83	1,78	1,73	1,65
	31	SHC	2,21	2,05	2,03	1,98	1,92	1,85
		TC	2,78	2,65	2,56	2,44	2,29	2,11
		CM	0,74	0,77	0,80	0,82	0,85	0,88
	23	SHC	1,14	1,08	1,05	1,00	0,94	0,87
21	25	SHC	1,35	1,27	1,24	1,19	1,13	1,06
	27	SHC	1,56	1,46	1,43	1,38	1,33	1,25
	29	SHC	1,77	1,64	1,62	1,58	1,52	1,45
	31	SHC	1,97	1,84	1,82	1,77	1,71	1,64
		TC	2,97	2,80	2,71	2,56	2,40	2,23
		CM	0,76	0,79	0,82	0,85	0,87	0,90
23	25	SHC	1,12	1,05	1,02	0,96	0,90	0,84
	27	SHC	1,32	1,23	1,21	1,15	1,09	1,03
	29	SHC	1,53	1,41	1,40	1,35	1,29	1,23
	31	SHC	1,74	1,62	1,60	1,54	1,48	1,42

TC: TOTAL COOLING CAPACITY kW
SHC: SENSIBLE HEAT CAPACITY kW
CM: COMPRESSOR INPUT kW

RATING CONDITIONS
Cooling: Indoor air temperature 27°C D.B. / 19°C W.B.
Outdoor air temperature 35°C D.B. / 24°C W.B.

NOTE: Data referred to AWR608HL

OUTDOOR UNIT: **AER609SH**
INDOOR UNIT: **AWR609HL**

220 - 240V ~ 50Hz

RATING CAPACITY			2,50 kW		moisture removal		1,1 l/h	
COMP. POWER INPUT			0,963 kW		max comp input		1,14 kW	
AIR FLOW RATE			450 m³/h					
EVAPORATOR		CONDENSER						
ENT.TEMP. °C		OUTDOOR AMBIENT TEMP. °C						
W.B.	D.B.		20	25	30	35	40	43
		TC	2,53	2,37	2,30	2,19	2,05	1,90
		CM	0,73	0,79	0,85	0,91	0,96	1,02
	21	SHC	1,75	1,62	1,59	1,54	1,47	1,40
	23	SHC	1,98	1,84	1,80	1,75	1,68	1,61
15	25	SHC	2,20	2,05	2,01	1,96	1,89	1,82
	27	SHC	2,43	2,27	2,22	2,17	2,05	1,90
	29	SHC	2,53	2,37	2,30	2,19	2,05	1,90
	31	SHC	2,53	2,37	2,30	2,19	2,05	1,90
		TC	2,71	2,57	2,47	2,35	2,21	2,03
		CM	0,76	0,81	0,87	0,93	0,99	1,05
	21	SHC	1,51	1,42	1,38	1,33	1,26	1,18
	23	SHC	1,74	1,63	1,59	1,53	1,47	1,39
17	25	SHC	1,97	1,85	1,80	1,74	1,68	1,60
	27	SHC	2,19	2,06	2,01	1,95	1,89	1,81
	29	SHC	2,42	2,28	2,22	2,16	2,10	2,02
	31	SHC	2,64	2,49	2,42	2,35	2,21	2,03
		TC	2,88	2,72	2,63	2,50	2,35	2,16
		CM	0,78	0,84	0,90	0,96	1,02	1,08
	21	SHC	1,27	1,19	1,15	1,10	1,03	0,96
	23	SHC	1,50	1,40	1,36	1,31	1,24	1,17
19	25	SHC	1,73	1,60	1,57	1,52	1,46	1,38
	27	SHC	1,94	1,81	1,78	1,73	1,66	1,59
	29	SHC	2,17	2,01	1,99	1,93	1,88	1,79
	31	SHC	2,40	2,22	2,20	2,15	2,08	2,01
		TC	3,03	2,88	2,78	2,65	2,49	2,29
		CM	0,82	0,88	0,94	0,99	1,05	1,11
	23	SHC	1,24	1,18	1,14	1,08	1,02	0,94
21	25	SHC	1,47	1,38	1,34	1,29	1,23	1,15
	27	SHC	1,70	1,58	1,55	1,50	1,44	1,36
	29	SHC	1,92	1,79	1,76	1,71	1,65	1,57
	31	SHC	2,14	2,00	1,97	1,92	1,86	1,78
		TC	3,23	3,04	2,95	2,78	2,60	2,42
		CM	0,85	0,91	0,97	1,02	1,08	1,14
23	25	SHC	1,21	1,14	1,10	1,04	0,98	0,91
	27	SHC	1,44	1,34	1,31	1,25	1,18	1,12
	29	SHC	1,67	1,54	1,52	1,46	1,40	1,33
	31	SHC	1,89	1,76	1,73	1,67	1,60	1,54

TC: TOTAL COOLING CAPACITY kW
SHC: SENSIBLE HEAT CAPACITY kW
CM: COMPRESSOR INPUT kW

RATING CONDITIONS

Cooling: Indoor air temperature 27°C D.B. / 19°C W.B.
Outdoor air temperature 35°C D.B. / 24°C W.B.

NOTE: Data referred to AWR608HL

OUTDOOR UNIT: **AER612SH**
INDOOR UNIT: **AWR612HL**

220 - 240V ~ 50Hz

RATING CAPACITY			3,10 kW		moisture removal		1,5 l/h	
COMP. POWER INPUT			1,206 kW		max comp input		1,426 kW	
AIR FLOW RATE			470 m³/h					
EVAPORATOR		CONDENSER						
ENT.TEMP. °C		OUTDOOR AMBIENT TEMP. °C						
W.B.	D.B.		20	25	30	35	40	43
		TC	3,13	2,94	2,85	2,72	2,55	2,35
		CM	0,91	0,99	1,06	1,13	1,21	1,28
	21	SHC	2,17	2,01	1,97	1,91	1,83	1,73
	23	SHC	2,46	2,28	2,24	2,17	2,09	1,99
15	25	SHC	2,73	2,54	2,49	2,43	2,35	2,25
	27	SHC	3,01	2,81	2,76	2,69	2,55	2,35
	29	SHC	3,13	2,94	2,85	2,72	2,55	2,35
	31	SHC	3,13	2,94	2,85	2,72	2,55	2,35
		TC	3,35	3,18	3,06	2,91	2,74	2,52
		CM	0,95	1,02	1,10	1,17	1,24	1,32
	21	SHC	1,87	1,76	1,71	1,64	1,56	1,46
	23	SHC	2,16	2,03	1,97	1,90	1,82	1,73
17	25	SHC	2,44	2,30	2,23	2,16	2,08	1,98
	27	SHC	2,72	2,56	2,49	2,42	2,34	2,24
	29	SHC	3,00	2,83	2,75	2,68	2,60	2,50
	31	SHC	3,27	3,09	3,01	2,91	2,74	2,52
		TC	3,57	3,37	3,26	3,10	2,91	2,68
		CM	0,98	1,06	1,13	1,21	1,28	1,35
	21	SHC	1,57	1,48	1,43	1,36	1,28	1,19
	23	SHC	1,86	1,74	1,69	1,62	1,54	1,45
19	25	SHC	2,14	1,99	1,95	1,88	1,81	1,71
	27	SHC	2,41	2,24	2,21	2,05	2,06	1,97
	29	SHC	2,69	2,49	2,47	2,40	2,33	2,22
	31	SHC	2,97	2,76	2,73	2,66	2,58	2,49
		TC	3,75	3,57	3,45	3,29	3,09	2,84
		CM	1,02	1,10	1,17	1,24	1,32	1,39
	23	SHC	1,54	1,46	1,41	1,34	1,26	1,17
21	25	SHC	1,82	1,71	1,66	1,60	1,52	1,43
	27	SHC	2,10	1,96	1,93	1,86	1,79	1,68
	29	SHC	2,38	2,21	2,18	2,12	2,04	1,95
	31	SHC	2,65	2,48	2,45	2,38	2,30	2,21
		TC	4,00	3,77	3,65	3,45	3,23	3,01
		CM	1,06	1,14	1,21	1,28	1,35	1,43
23	25	SHC	1,50	1,41	1,37	1,29	1,21	1,13
	27	SHC	1,78	1,66	1,62	1,55	1,47	1,39
	29	SHC	2,07	1,91	1,89	1,81	1,73	1,65
	31	SHC	2,35	2,18	2,15	2,07	1,99	1,91

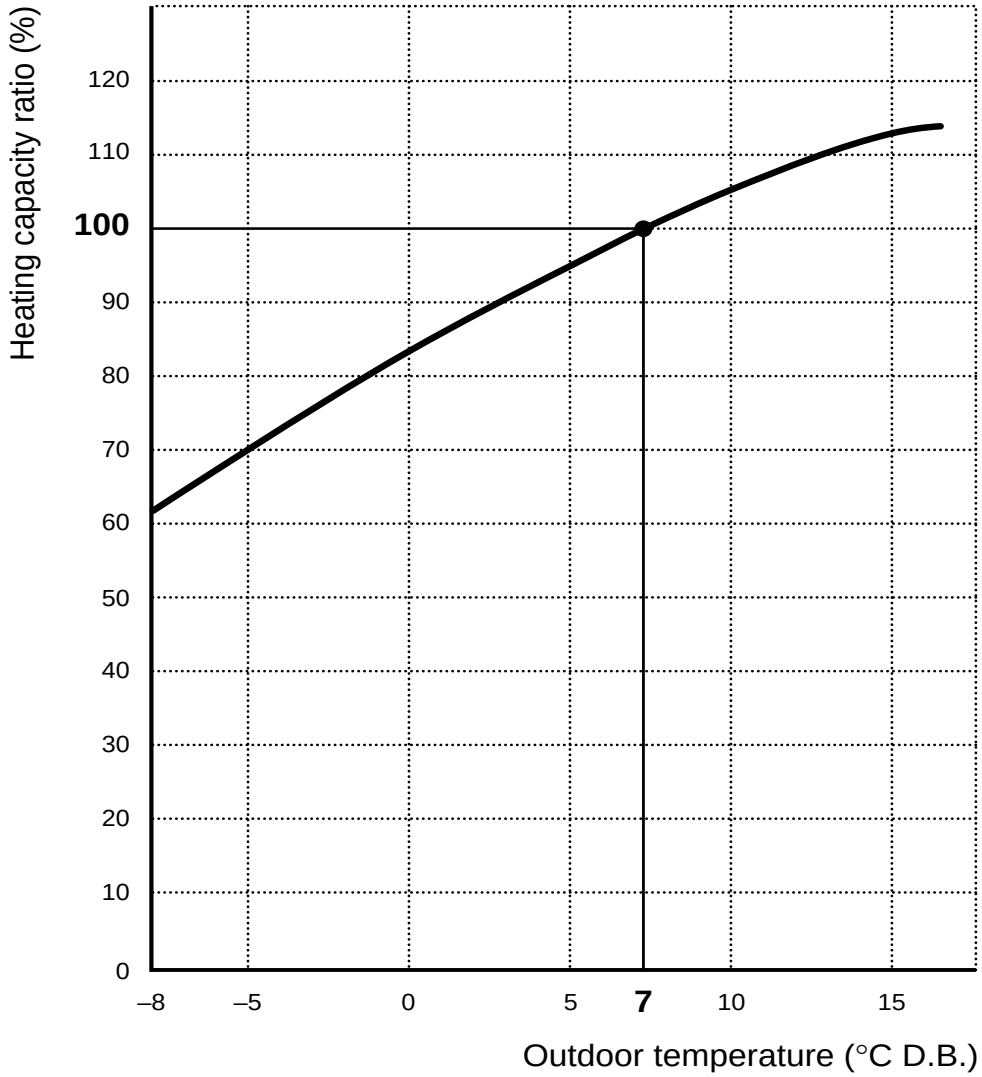
TC: TOTAL COOLING CAPACITY kW
SHC: SENSIBLE HEAT CAPACITY kW
CM: COMPRESSOR INPUT kW

RATING CONDITIONS

Cooling: Indoor air temperature 27°C D.B. / 19°C W.B.
Outdoor air temperature 35°C D.B. / 24°C W.B.

NOTE: Data referred to AWR608HL

5-3 Heating Capacity



NOTE

1) ● … Point of Rating condition
   Black dot in the chart indicate the following rating condition.
   Indoor : 20°C D.B.
   Outdoor : 7°C D.B. / 6°C W.B.

2) Above characteristics indicate instantaneous operation, which does not take into consideration defrost operation.

3) Fan speed : High

4) Because this air conditioner heats a room by drawing in the heat of the outside air (heat pump system), the heating efficiency will fall off when the outdoor temperature is very low. If sufficient heat cannot be obtained with this air conditioner, use another heating appliance in conjunction with it.

NOTE: Data referred to Hi-Wall models AWR608HL
AWR609HL
AWR612HL

6. ELECTRICAL DATA

6-1 Electrical characteristics

OUTDOOR UNIT: **AER608SH**

COOLING

			Indoor Unit	Outdoor unit		Complete Unit
			Fan Motor	Fan Motor	Compressor	
performance at			230V 1-Phase 50 Hz			
Rating conditions	Running Amps.	A	0,11	0,28	3,61	4,0
	Power input	Kw	0,025	0,063	0,802	0,890
Full load conditions	Running Amps.	A	0,11	0,28	4,11	4,5
	Power input	Kw	0,025	0,063	0,902	0,990

Rating Conditions: Indoor Air Temperature 27°C D.B. / 19°C W.B.
Outdoor Air Temperature 35°C D.B.
Full Load Conditions: Indoor Air Temperature 32°C D.B. / 23°C W.B.
Outdoor Air Temperature 43°C D.B.

HEATING

			Indoor Unit	Outdoor unit		Complete Unit
			Fan Motor	Fan Motor	Compressor	
performance at			230V 1-Phase 50 Hz			
Rating conditions	Running Amps.	A	0,11	0,28	3,61	4,0
	Power input	Kw	0,025	0,063	0,772	0,860
Full load conditions	Running Amps.	A	0,11	0,28	3,91	4,3
	Power input	Kw	0,025	0,063	0,812	0,900

Rating Conditions: Indoor Air Temperature 20°C D.B.
Outdoor Air Temperature 7°C D.B. / 6°C W.B.
Full Load Conditions: Indoor Air Temperature 27°C D.B.
Outdoor Air Temperature 24°C D.B. / 18°C W.B.

NOTE: Data referred to indoor unit AWR608HL model.
For other indoor unit models there could be some differences.

OUTDOOR UNIT: **AER609SH**

COOLING

			Indoor Unit	Outdoor unit		Complete Unit
			Fan Motor	Fan Motor	Compressor	
performance at			230V 1-Phase 50 Hz			
Rating conditions	Running Amps.	A	0,12	0,28	4,3	4,7
	Power input	Kw	0,027	0,063	0,963	1,040
Full load conditions	Running Amps.	A	0,12	0,28	5,1	5,5
	Power input	Kw	0,027	0,063	1,140	1,230

Rating Conditions: Indoor Air Temperature 27°C D.B. / 19°C W.B.
Outdoor Air Temperature 35°C D.B.
Full Load Conditions: Indoor Air Temperature 32°C D.B. / 23°C W.B.
Outdoor Air Temperature 43°C D.B.

HEATING

			Indoor Unit	Outdoor unit		Complete Unit
			Fan Motor	Fan Motor	Compressor	
performance at			230V 1-Phase 50 Hz			
Rating conditions	Running Amps.	A	0,12	0,28	4,3	4,7
	Power input	Kw	0,027	0,063	0,973	1,050
Full load conditions	Running Amps.	A	0,12	0,28	4,8	5,2
	Power input	Kw	0,027	0,063	1,080	1,170

Rating Conditions: Indoor Air Temperature 20°C D.B.
Outdoor Air Temperature 7°C D.B. / 6°C W.B.
Full Load Conditions: Indoor Air Temperature 27°C D.B.
Outdoor Air Temperature 24°C D.B. / 18°C W.B.

NOTE: Data referred to indoor unit AWR609HL model.
For other indoor unit models there could be some differences.

OUTDOOR UNIT: **AER612SH**

COOLING

			Indoor Unit	Outdoor unit		Complete Unit
			Fan Motor	Fan Motor	Compressor	
performance at			230V 1-Phase 50 Hz			
Rating conditions	Running Amps.	A	0,13	0,28	5,79	6,2
	Power input	Kw	0,031	0,063	1,206	1,300
Full load conditions	Running Amps.	A	0,13	0,28	6,79	7,2
	Power input	Kw	0,031	0,063	1,426	1,520

Rating Conditions: Indoor Air Temperature 27°C D.B. / 19°C W.B.
Outdoor Air Temperature 35°C D.B.
Full Load Conditions: Indoor Air Temperature 32°C D.B. / 23°C W.B.
Outdoor Air Temperature 43°C D.B.

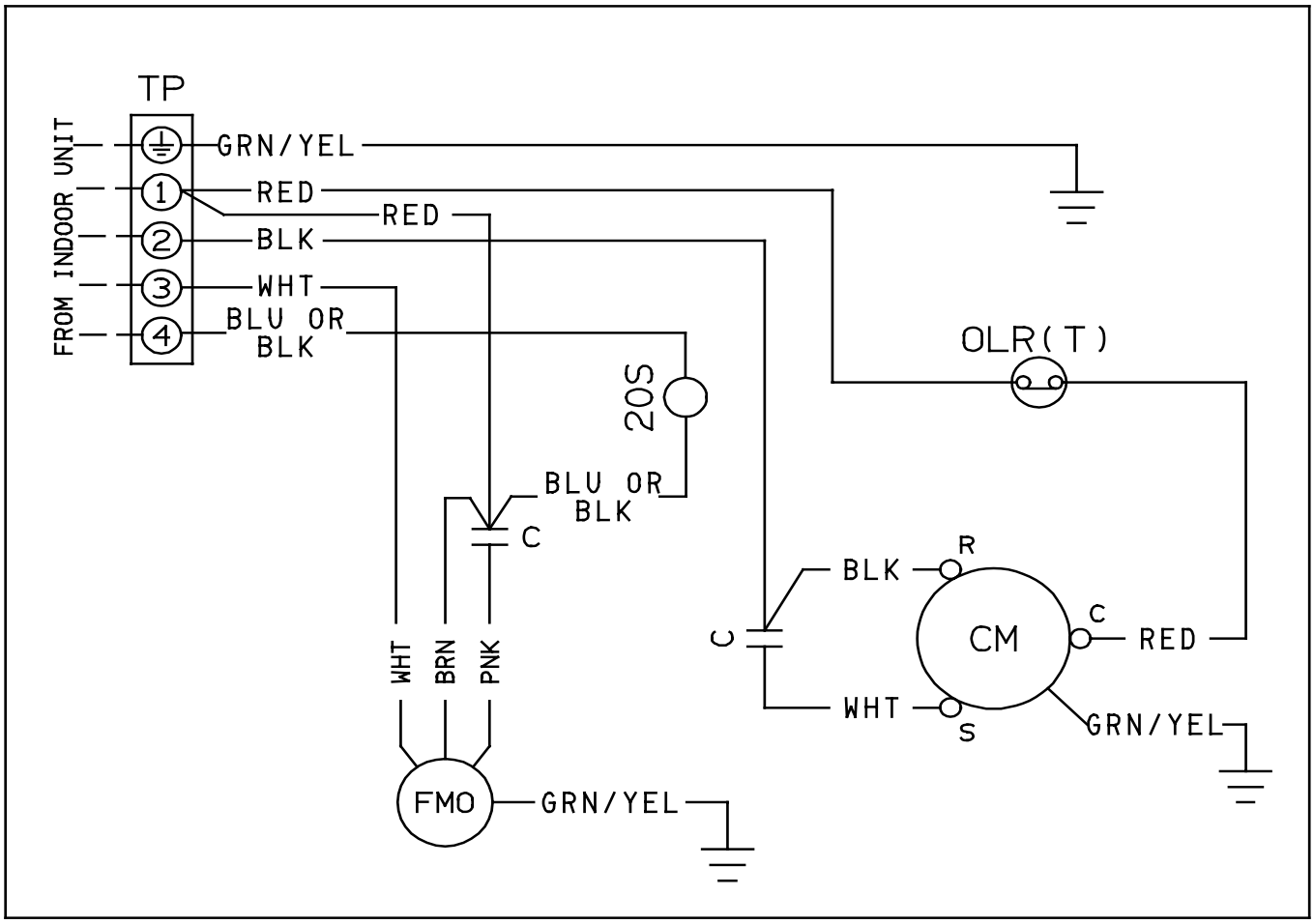
HEATING

			Indoor Unit	Outdoor unit		Complete Unit
			Fan Motor	Fan Motor	Compressor	
performance at			230V 1-Phase 50 Hz			
Rating conditions	Running Amps.	A	0,13	0,28	6,19	6,6
	Power input	Kw	0,031	0,063	1,306	1,400
Full load conditions	Running Amps.	A	0,13	0,28	6,89	7,3
	Power input	Kw	0,031	0,063	1,346	1,440

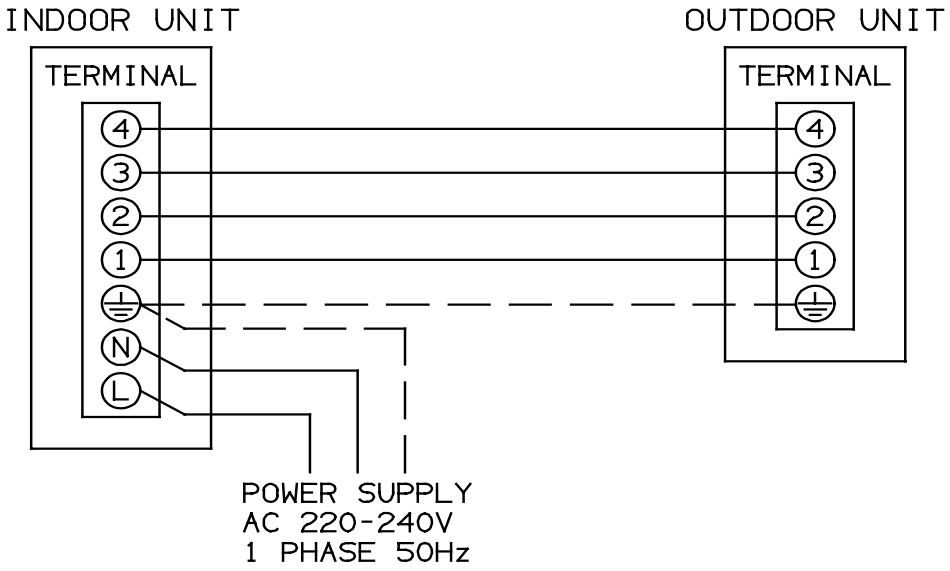
Rating Conditions: Indoor Air Temperature 20°C D.B.
Outdoor Air Temperature 7°C D.B. / 6°C W.B.
Full Load Conditions: Indoor Air Temperature 27°C D.B.
Outdoor Air Temperature 24°C D.B. / 18°C W.B.

NOTE: Data referred to indoor unit AWR612HL model.
For other indoor unit models there could be some differences.

6-2 Electric Wiring Diagram



6-3 System Wiring Diagram



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