

Service Manual

AIR CONDITIONER

CS-A18BD3P CU-A18BBP5
CS-A18BD3P CU-C18BBP5

Supplement

Subject : Revision

Please file and use this supplement manual together with the service manual for Model No. CS-A18BD3P/CU-A18BBP5, CS-A18BD3P/CU-C18BBP5, Order No. MAC0208031C8.

WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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Panasonic

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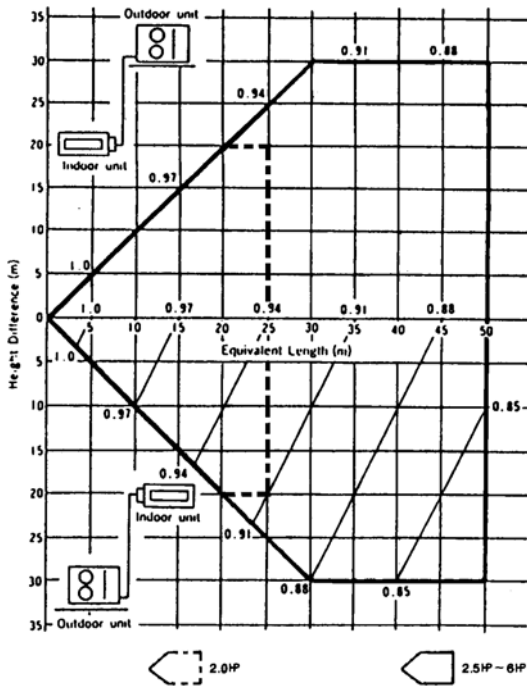
1 PIPE LENGTH

1.1. CORRECTION OF COOLING AND HEATING CAPACITIES

Correction of cooling and heating capacities according to the connecting pipe length.

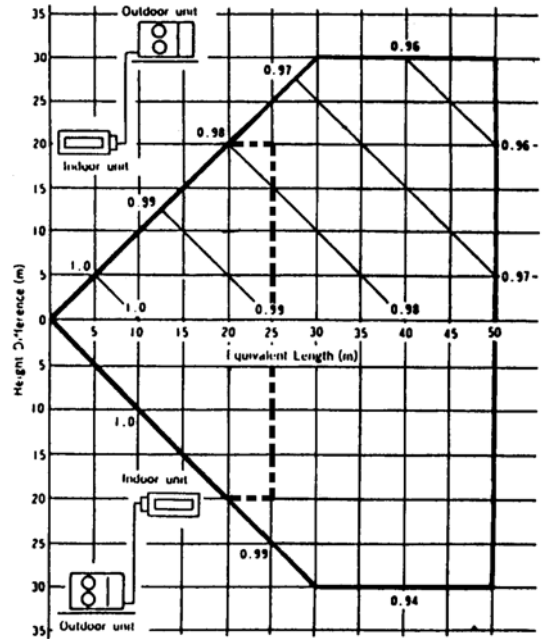
The data of cooling capacities (marked on the name plate) are based on 5 metres connecting pipe and horizontal installation.

(Cooling)



For other pipe length of other installation multiply by the following correction factor to determine the revised cooling capacity.

(Heating)



Equivalent Length = actual pipe length + number of elbow x ELE + number of oil trap x ELO

ELE : equivalent length of elbow.

ELO : equivalent length of oil trap.

1.2. REFRIGERANT ADDITIONAL CHARGE

- The piping length exceeds 10 metres.
APPLICABLE FOR ALL MODELS

Before shipment, this air conditioner is filled with the rated amount of refrigerant subject to 10m piping length. (The rated amount of refrigerant is indicated on the name plate.) But when the piping length exceeds 10m, additional charge is required according to the following table.

Outer diameter of gas side pipe mm (inch)	ELE
6.35 (1/4)	0.18
12.7 (1/2)	0.20
15.88 (5/8)	0.25
19.05 (3/4)	0.35

Model	Ref. Charge
2.0 & 2.5HP	20g per 1m
3-6HP	50g per 1m

Example :

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In case of 10 m long pipe (one-way), the amount of refrigerant to be replenished is:
(10 - 10) x 20 = 0g

CS-A43BD3P

In case of 50m long pipe (one-way), the amount of refrigerant to be replenished is:
(50 - 30) x 50 = 1,000g

2 CAPACITY AND POWER CONSUMPTION (Page: 34)

2.1. PERFORMANCE DATA

2.1.1. COOLING PERFORMANCE

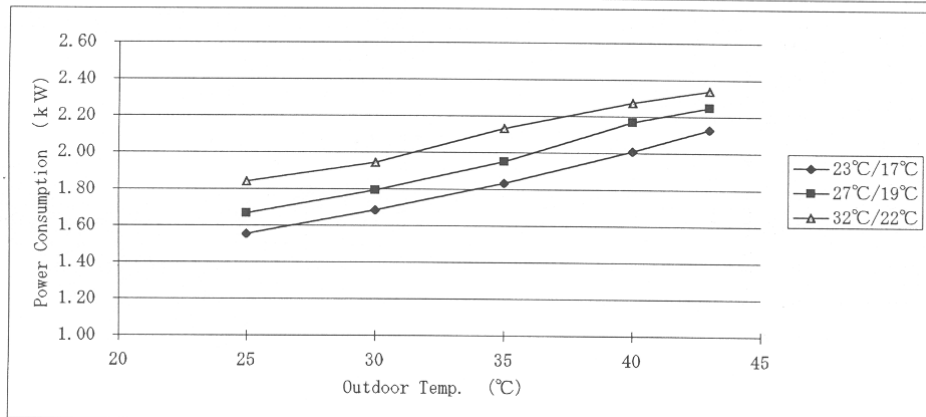
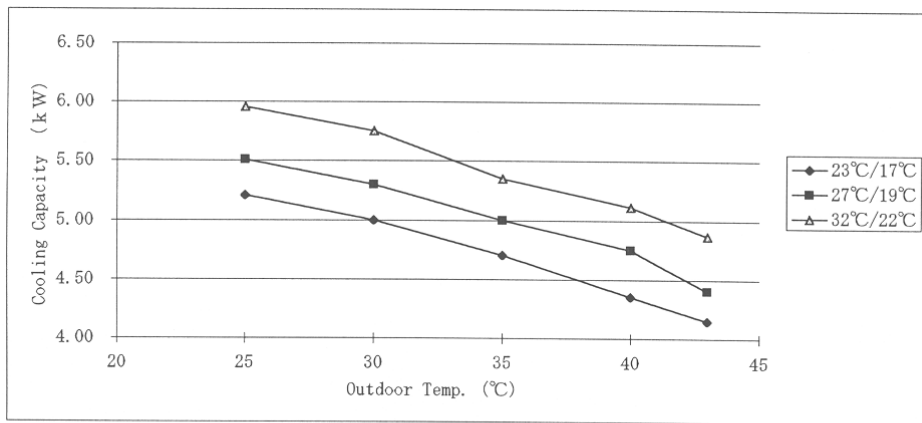
Model	Cooling Capacity	Cooling capacities are based conditions
CS-A18BD3P CU-A18BBP5 CU-C18BBP5	5.00kW	<ul style="list-style-type: none"> Indoor temp. 27°C D.B. 19°C W.B. Outdoor temp. 35°C D.B. Standard air volume 17 m³/min

Ambient Return Air		Temperature Air Entering Condenser (°C D.B.)														
		25°C			30°C			35°C			40°C			43°C		
		TC	SHC	IPT	TC	SHC	IPT	TC	SHC	IPT	TC	SHC	IPT	TC	SHC	IPT
D.B.	W.B.	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	
23	17	5.21	3.49	1.55	5.00	3.45	1.68	4.71	3.34	1.83	4.35	3.18	2.01	4.15	3.11	2.13
	19	5.50	2.91	1.65	5.33	2.93	1.78	5.05	2.88	1.94	4.71	2.78	2.13	4.47	2.73	2.26
	22	6.00	2.46	1.78	5.84	2.51	1.92	5.57	2.51	2.10	5.22	2.45	2.30	4.97	2.43	2.44
25	17	5.14	4.06	1.55	4.94	4.00	1.68	4.66	3.87	1.83	4.32	3.67	2.00	4.08	3.55	2.12
	19	5.50	3.58	1.65	5.31	3.56	1.79	5.03	3.47	1.95	4.68	3.32	2.12	4.44	3.24	2.25
	22	6.00	2.94	1.79	5.82	2.97	1.93	5.53	2.93	2.10	5.15	2.83	2.29	4.92	2.81	2.43
27	17	5.08	4.83	1.56	4.89	4.74	1.68	4.61	4.61	1.82	4.29	4.29	1.98	4.06	4.06	2.10
	19	5.51	4.19	1.66	5.30	4.13	1.79	5.00	4.00	1.95	4.75	3.90	2.17	4.40	3.70	2.25
	22	5.99	3.42	1.80	5.79	3.42	1.94	5.49	3.35	2.11	5.10	3.21	2.29	4.88	3.17	2.43
29	17	5.07	4.82	1.55	4.89	4.74	1.67	4.60	4.60	1.80	4.32	4.32	1.94	4.11	4.11	2.02
	19	5.50	5.06	1.65	5.30	4.98	1.79	5.00	4.80	1.93	4.69	4.59	2.07	4.45	4.45	2.16
	22	5.97	4.00	1.82	5.77	3.98	1.97	5.45	3.87	2.12	5.11	3.73	2.28	4.87	3.65	2.37
32	17	5.06	4.81	1.54	4.89	4.74	1.67	4.28	4.28	1.79	4.34	4.34	1.90	4.14	4.14	1.96
	19	5.49	5.22	1.65	5.30	5.14	1.79	5.00	5.00	1.91	4.71	4.71	2.04	4.49	4.49	2.10
	22	5.96	4.94	1.84	5.75	4.89	1.94	5.35	4.65	2.13	5.11	4.55	2.27	4.87	4.43	2.34

TC: Cooling Capacity

SHC: Sensible Heat Capacity

IPT: Cooling Power Consumption



2.1.2. HEATING PERFORMANCE

Model	Heating Capacity	Heating capacities are based conditions
CS-A18BD3P CU-A18BBP5	5.6kW	<ul style="list-style-type: none"> • Single Phase, 50Hz, 230V • Indoor temp. 20°C D.B.T. • Outdoor temp. 7°C D.B. 6°C W.B.T. • Standard air volume 17 m³/min

Inlet Air		Outdoor Temperature (°C W. B. T.)							
Air Volume (m ³ /min)	Entering Air D. B. T. (°C)	-6°C		0°C		6°C		12°C	
		H.C.	IPT	H.C.	IPT	H.C.	IPT	H.C.	IPT
17 m ³ /min	15	4.09	1.32	4.90	1.50	5.88	1.79	6.83	2.11
	20	3.86	1.39	4.62	1.60	5.60	1.88	6.72	2.18
	25	3.64	1.47	4.37	1.69	5.32	1.97	6.44	2.23