

TECHNICAL & SERVICE MANUAL

Series PLH Ceiling Cassettes

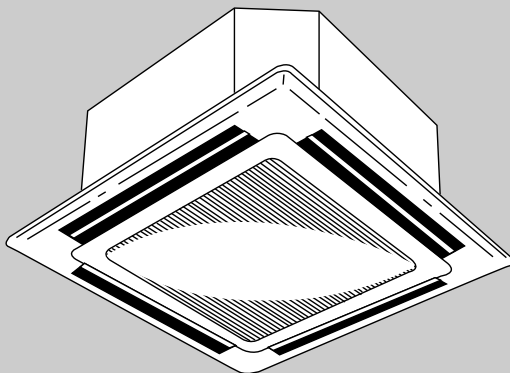
Indoor unit
[Models]

PLH-1.6KKB

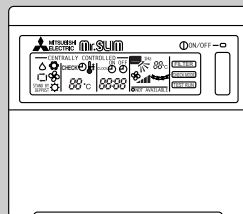
[Service Ref.]

PLH-1.6KKB.UK

Refer to OC150 for outdoor (PUH-1.6VKA3.UK) units, and OC119 for indoor items other than this manual.



INDOOR UNIT



REMOTE CONTROLLER

CONTENTS

- 1. SPECIFICATIONS.....3
- 2. DATA4
- 3. REFRIGERANT SYSTEM DIAGRAM7
- 4. PARTS LIST.....8

The Slim Line.
From Mitsubishi Electric.

Mr.SLIM™

1

SPECIFICATIONS

Item	Service Ref.		PLH-1.6KKB.UK		
Function			Cooling	Heating	
Capacity	Btu/h		15,000	15,900	
	W		4,400	4,650	
Total input	kW		1.59	1.51	
INDOOR UNIT	Service Ref.		PLH-1.6KKB.UK		
	Power supply(phase, cycle,voltage)		Single, 50Hz, 220-240V		
	Input	kW	0.15	0.10	
	Running current	A	0.64	0.45	
	Starting current	A	0.70	0.50	
	External finish		Galvanized sheets with gray heat insulation		
	Heat exchanger		Plate fin coil		
	Fan(drive) × No.		Turbo fan (direct) × 1		
	Fan motor output	kW	0.030		
	Airflow(Low-High)	m ³ / min (CFM)	13-16(460-565)		
	External static pressure	Pa(mmAq)	0(direct blow)		
	Booster heater	kW	—		
	Operation control & Thermostat		Remote controller & built-in		
	Noise level(Low-High)	dB(A)	32-37		
	Cond. drain connection O.D.	mm(in)	32(1-1/4)		
	Dimensions	W	mm(in)	UNIT : 660(26)	PANEL : 760(30)
		D	mm(in)	UNIT : 660(26)	PANEL : 760(30)
		H	mm(in)	UNIT : 253(10)	PANEL : 30(1-1/8)
	Weight	kg(lbs)	UNIT : 19(42)	PANEL : 3.7(8)	
	OUTDOOR UNIT	Service Ref.		PUH-1.6VKA₃.UK	
Power supply (phase, cycle, voltage)		Single, 50Hz, 220-240V			
Input		kW	1.44	1.41	
Running current		A	6.74	6.60	
Starting current		A	33		
External finish		Munsell 5Y 7/1			
Refrigerant control		Capillary tube			
Compressor		Hermetic			
Model		RH247VFCT			
Motor output		kW	1.2		
Starter type		Line start			
Protection devices		Inner thermostat, High pressure switch			
Heat exchanger		Plate fin coil			
Fan(drive) × No.		Propeller (direct) ×1			
Fan motor output		kW	0.065		
Airflow		m ³ / min (CFM)	45(1,590)		
Defrost method		Reverse cycle			
Noise level		dB(A)	49		
Dimensions		W	mm(in)	870(34-1/4)	
		D	mm(in)	295+24 (11-5/8 add 1)	
	H	mm(in)	650(25-5/8)		
Weight	kg(lbs)	53(117)			
Refrigerating oil (Model)	CC	570(MS-56)			
Refrigerant		R-22			
Charge		kg(lbs)	2.2(4.8)		
Pipe size O.D.	Liquid	mm(in)	9.52 (3/8)		
	Gas	mm(in)	15.88(5/8)		
Connection method	Indoor side		Flared		
	Outdoor side		Flared		
Between the indoor & outdoor unit	Height difference		Max. 40m		
	Piping length		Max. 40m		
REFRIGERANT PIPING					

*1. Rating condition (Cooling)···Indoor 27°C D.B., 19.0°C W.B., Outdoor 35°C D.B.
 Rating condition (Heating)···Indoor 20°C D.B., Outdoor 7°C D.B., 6°C W.B. } (JIS B8616)

2

DATA

1. PERFORMANCE DATA

1) COOLING CAPACITY

Service Ref.	Indoor intake air W.B.°C	Outdoor intake air D.B.°C											
		20		25		30		35		40		45	
		CA	P.C.	CA	P.C.	CA	P.C.	CA	P.C.	CA	P.C.	CA	P.C.
PLH-1.6KKB.UK	16	4,439	1.27	4,317	1.33	4,159	1.43	3,990	1.53	3,812	1.64	3,624	1.74
	18	4,726	1.30	4,602	1.36	4,434	1.46	4,258	1.57	4,074	1.68	3,882	1.79
	20	5,017	1.32	4,899	1.38	4,724	1.50	4,542	1.61	4,352	1.72	4,154	1.84
	22	5,310	1.35	5,209	1.41	5,028	1.53	4,840	1.65	4,645	1.77	4,442	1.90

Note CA :Capacity (W)
P.C. :Power consumption (kW)

Cooling capacity correction factors

Service Ref.	Refrigerant piping length(one way)									
	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m
PLH-1.6KKB.UK	1.00	0.993	0.984	0.978	0.969	0.961	0.956	0.948	-	-

2) HEATING CAPACITY

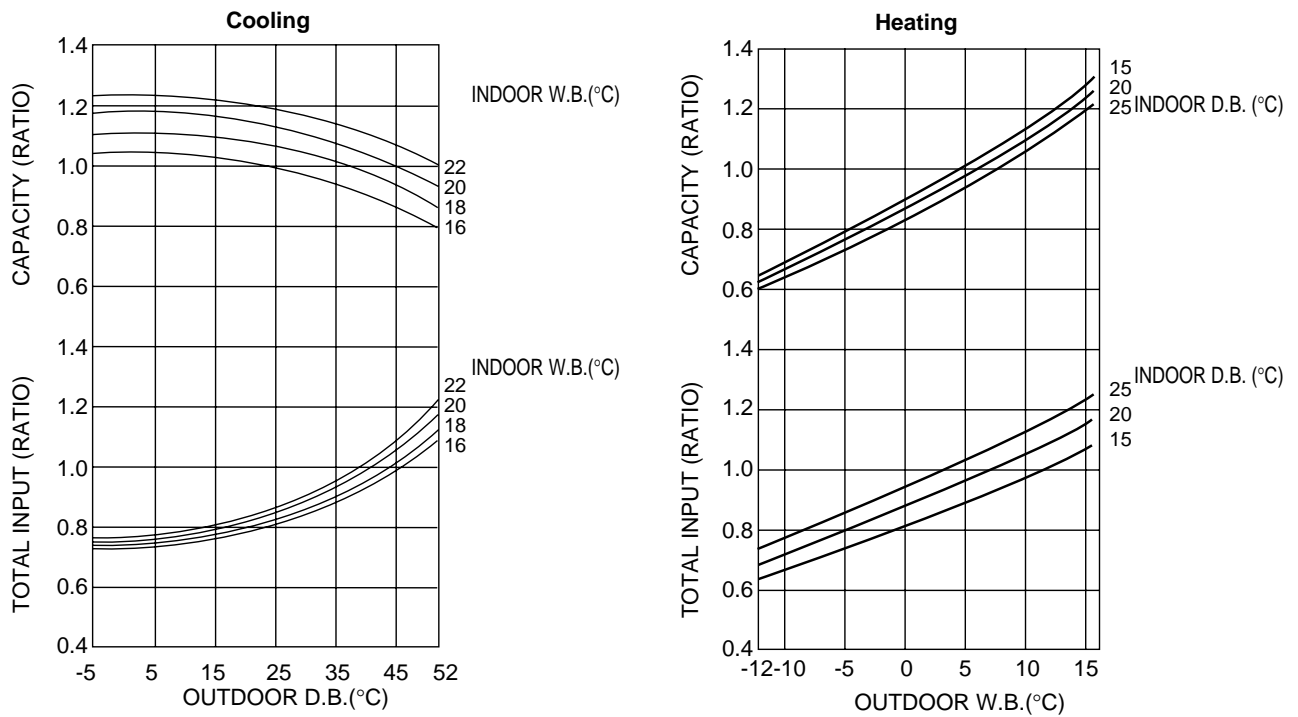
Service Ref.	Indoor intake air D.B.°C	Outdoor intake air D.B.°C											
		-10		-5		0		5		10		15	
		CA	P.C.	CA	P.C.	CA	P.C.	CA	P.C.	CA	P.C.	CA	P.C.
PLH-1.6KKB.UK	15	3,184	1.03	3,650	1.14	4,160	1.25	4,714	1.38	5,312	1.51	5,952	1.64
	20	3,049	1.11	3,506	1.23	4,003	1.35	4,538	1.48	5,112	1.62	5,724	1.77
	25	2,930	1.18	3,364	1.31	3,844	1.44	4,370	1.59	4,942	1.74	5,560	1.90

Note CA :Capacity (W)
P.C. :Power consumption (kW)

Heating capacity correction factors

Service Ref.	Refrigerant piping length(one way)									
	5m	10m	15m	20m	25m	30m	35m	40m	45m	50m
PLH-1.6KKB.UK	1.00	1.00	1.00	1.00	1.00	1.00	0.998	0.995	-	-

2. PERFORMANCE CURVE PLH-1.6KKB.UK



3. ELECTRICAL DATA

Power Supply	Indoor unit	220V 50Hz 1phase		230V 50Hz 1phase		240V 50Hz 1phase	
	Outdoor unit	220V 50Hz 1phase		230V 50Hz 1phase		240V 50Hz 1phase	
Service Ref.	Indoor unit	PLH-1.6KKB.UK		PLH-1.6KKB.UK		PLH-1.6KKB.UK	
	Outdoor unit	PUH-1.6VKA ₃ .UK		PUH-1.6VKA ₃ .UK		PUH-1.6VKA ₃ .UK	
Mode		Cool	Heat	Cool	Heat	Cool	Heat
Capacity (W)		4,300	4,550	4,350	4,600	4,400	4,650
Total Input (kW)		1.48	1.40	1.54	1.45	1.59	1.51
Indoor	Input (kW)	0.12	0.08	0.14	0.09	0.15	0.10
	Current (A)	0.60	0.41	0.62	0.43	0.64	0.45
	Starting current (A)	0.66	0.45	0.68	0.47	0.70	0.50
Outdoor	Input (kW)	1.36	1.32	1.40	1.36	1.44	1.41
	Current (A)	6.79	6.59	6.76	6.57	6.74	6.60
	Starting current (A)	30	30	32	32	33	33



4. STANDARD OPERATION DATA

Service Ref.			PLH-1.6KKB.UK		
Mode			Cooling	Heating	
Total	Capacity	W	4,400	4,650	
	Input	kW	1.59	1.51	
Indoor unit Service Ref.			PLH-1.6KKB.UK		
Electrical circuit	Phase,Hz		1,50		
	Volts	V	240		
	Amperes	A	0.64	0.45	
	Outdoor unit Service Ref.			PUH-1.6VKA3.UK	
	Phase,Hz		1,50		
	Volts	V	240		
Refrigerant circuit	Amperes	A	6.74	6.60	
	Discharge pressure	MPa•G (kgf/cm ² •G)	1.80 (18.3)	1.70 (17.3)	
	Suction pressure	MPa•G (kgf/cm ² •G)	0.54 (5.51)	0.40 (4.08)	
	Discharge temperature	°C	78.7	77.2	
	Condensing temperature	°C	48.5	–	
	Suction temperature	°C	8.5	0.7	
	Ref. pipe length	m	5	5	
Indoor side	Intake air temperature	D.B.°C	27	20	
		W.B.°C	19	15	
	Discharge air temperature	D.B.°C	16.1	35.2	
Outdoor side	Intake air temperature	D.B.°C	35	7	
		W.B.°C	24	6	
	SHF		0.83	–	
BF		0.21	–		

The unit of pressure has been changed to Mpa based on the international SI system.

The conversion factor is : 1 (Mpa•G) = 10.2 (kgf/cm²•G)

5. OUTLET AIR SPEED AND COVERAGE RANGE

			PLH-1.6KKB.UK
Standard	Air flow	m ³ /min	16.0
	Air speed	m/sec.	5.6
	Coverage range	m	6.0
High ceiling	Air flow	m ³ /min	17.0
	Air speed	m/sec.	5.9
	Coverage range	m	6.4
	Total width of discharge outlets	mm	0

* The air coverage range is the value up to the position where the air speed is 0.25m/sec.

When air is blown out horizontally from the unit at the Hi notch position.

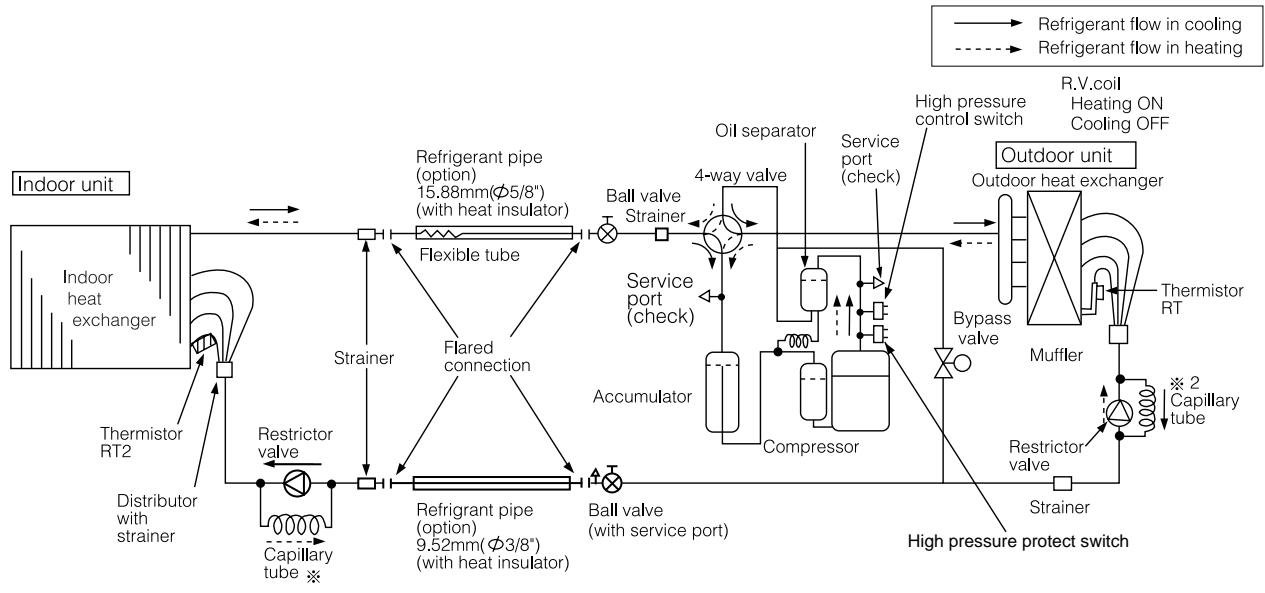
The coverage range should be used only as a general guideline since it varies according to the size of the room and the furniture inside the room.

3

REFRIGERANT SYSTEM DIAGRAM

PLH-1.6KKB.UK / PUH-1.6VKA₃.UK

Unit : mm



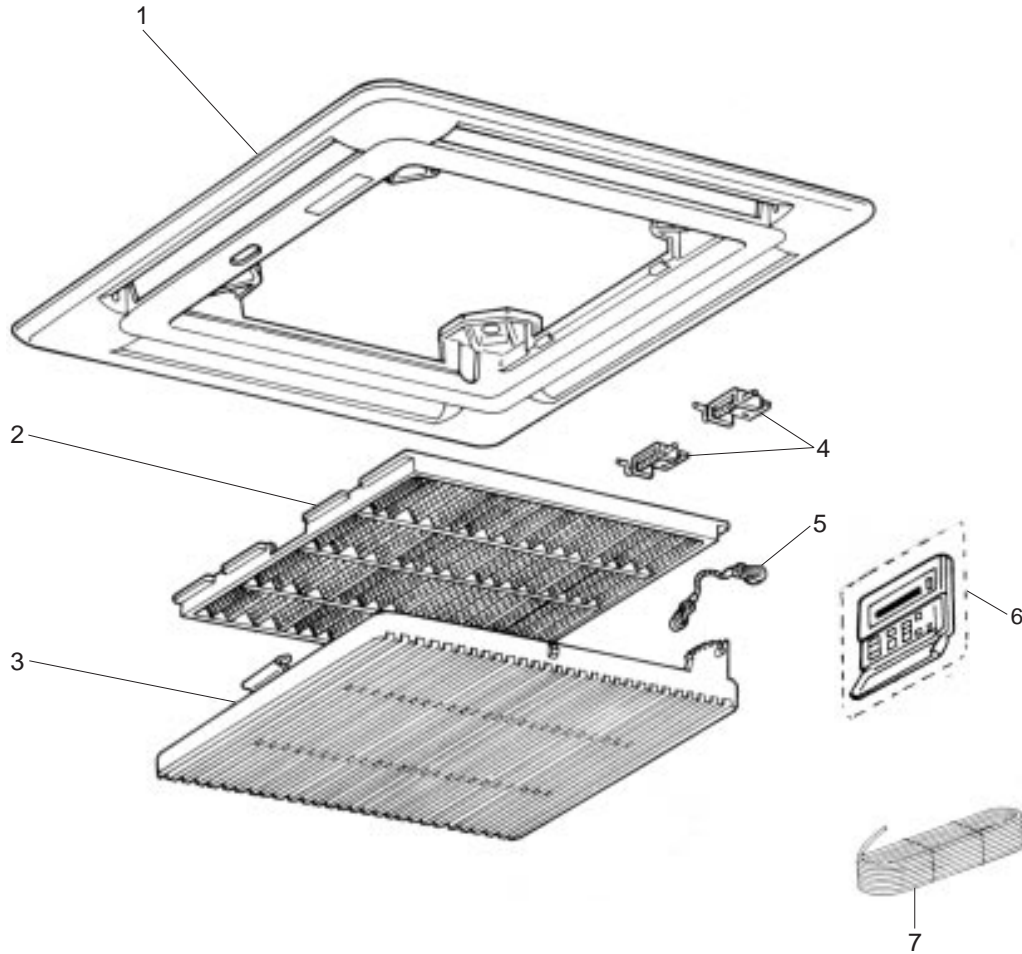
※1
O.D.φ3.2×I.D.φ1.6- l 630

※ 2 Capillary tube size
O.D.φ3.2×I.D.φ1.8- l 600

4

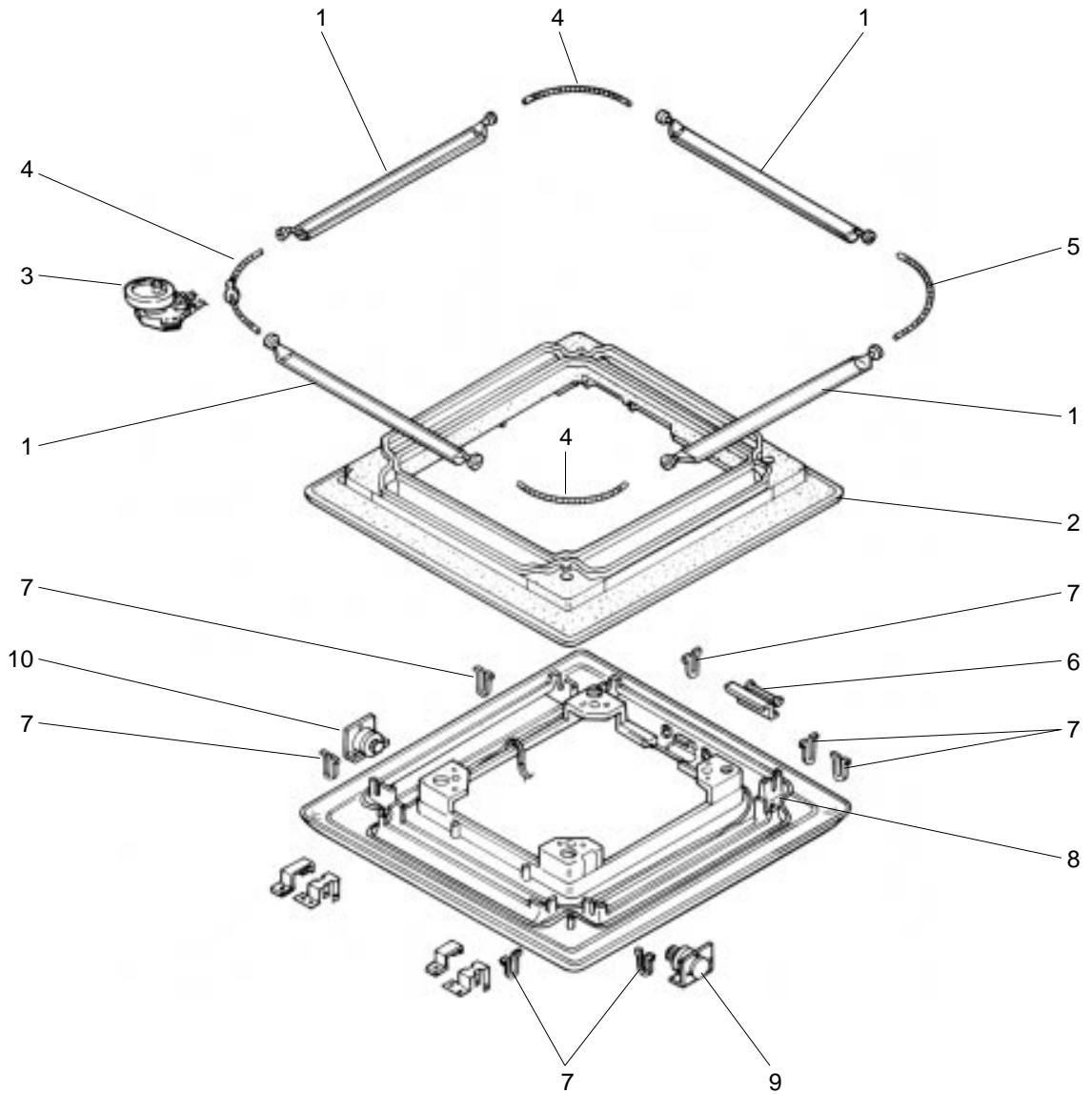
PARTS LIST

PANEL PARTS
PLH-1.6KKB.UK



No.	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wining Diagram Symbol	Recom- mended Q'ty	Price	
				PLH-1.6 KKB.UK				Unit	Amount
1	T7W 560 003	AIR OUTLET GRILLE		1					
2	R01 29H 500	AIR FILTER		1					
3	R01 29H 691	INTAKE GRILLE		1					
4	R01 29H 061	HINGE		2					
5	-	GRILLE HANGER		1	(BG88H096H01)				
6	T7W 14K 200	REMOTE CONTROLLER		1		R.B			
7	T7W 556 305	REMOTE CONTROLLER CABLE	12m	1					

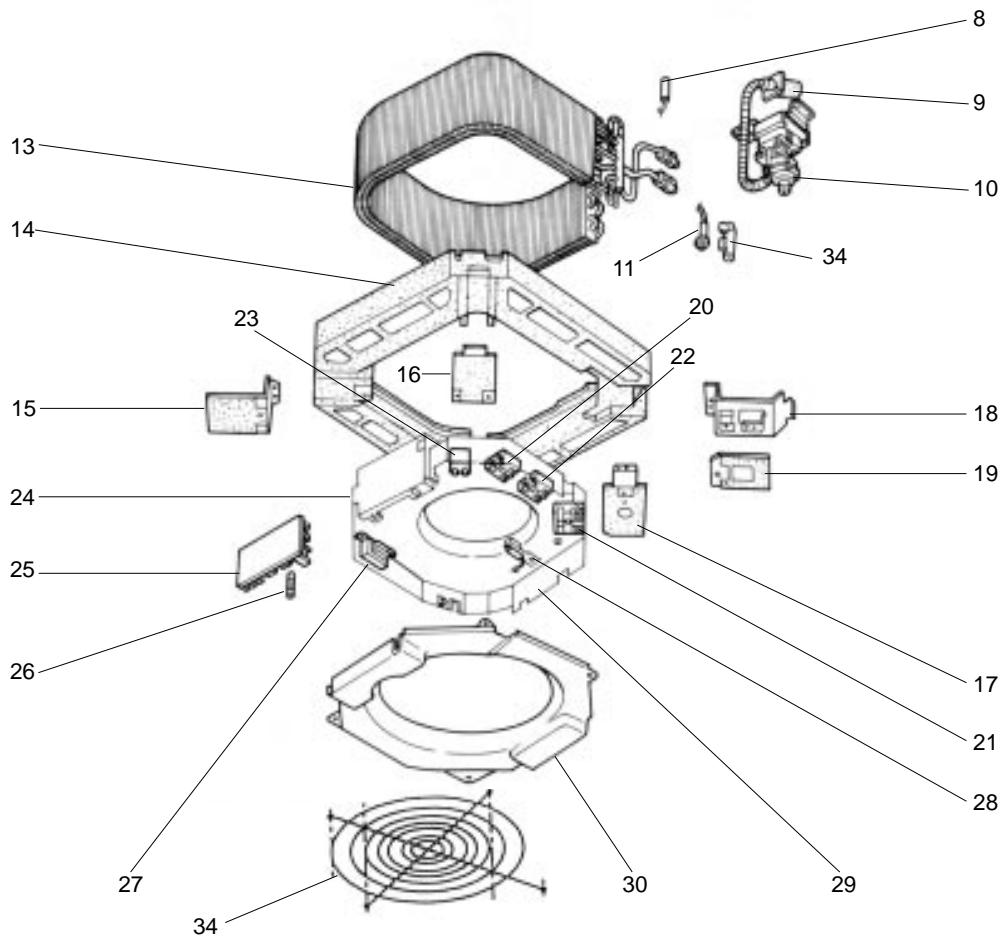
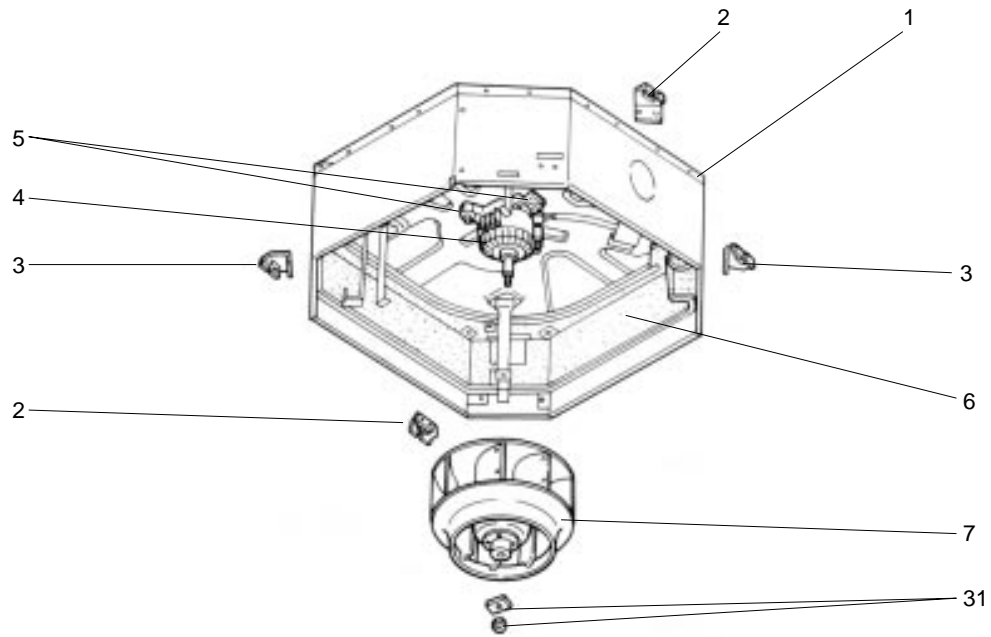
**PANEL PARTS
PLH-1.6KKB.UK**



No.	Part No.	Part Name	Specification	Q'ty/set	Remarks	Wiring Diagram Symbol	Recom- mended Q'ty	Price	
				PLH-1.6 KKB.UK				Unit	Amount
1	R01 29H 002	AUTO VANE		4					
2	R01 29H 085	AIR GUIDE		1					
3	R01 29H 223	VANE MOTOR		1		MV			
4	R01 29H 063	SPRING JOINT 1		1	<3/SET>				
5	T7W 33K 063	SPRING JOINT		1					
6	R01 29H 056	PUSH BUTTON		1					
7	R01 29H 047	VANE SUPPORT		8					
8	T7W 560 258	COARD HEATER	240V 28.2W	1		H			
9	R01 29H 040	GRILLE GEAR (RIGHT)		1					
10	R01 29H 041	GRILLE GEAR (LEFT)		1					



**FUNCTIONAL PARTS
PLH-1.6KKB.UK**





No.	Part No.	Part Name	Specification	Q'ty/set	Remarks (Drawing No.)	Wiring Diagram Symbol	Recom- mended Q'ty	Price	
				PLH-1.6 KKB.UK				Unit	Amount
1	-	BASE		1	(BG00T765G01)				
2	-	LEG		2	(BG00K209G01)				
3	-	LEG		2	(BG00K209G02)				
4	T7W E00 762	FAN MOTOR	PAI-V30F	1		MF1			
5	R01 29H 105	MOTOR MOUNT		3					
6	-	INNER COVER		1	(BG00T770G01)				
7	R01 41N 114	TURBO FAN		1					
8	R01 08K 202	INDOOR COIL THERMISTOR		1		RT2			
9	R01 29H 523	DRAIN SOCKET		1					
10	T7W 55K 355	DRAIN PUMP		1		DP			
11	R01 W28 266	DRAIN SENSOR		1		DS			
⑫	R01 W28 527	DRAIN HOSE		1					
13	T7W 580 480	HEAT EXCHANGER		1					
14	S70 A00 529	DRAIN PAN		1					
15	-	CORNER SUPPORT(1)		1	(BG00K210G01)				
16	-	CORNER SUPPORT(2)		1	(BG00K211G01)				
17	-	CORNER SUPPORT(2)		1	(BG00K212G01)				
18	-	CORNER SUPPORT(3)		1	(RG00T856G01)				
19	-	LEAD WIRE COVER		1	(BG00T861G01)				
20	T7W 521 716	TERMINAL BLOCK	3P(L,N,⊕)	1		TB2			
21	T7W 517 716	TERMINAL BLOCK	3P(1,2,3)	1		TB4			
22	T7W 515 716	TERMINAL BLOCK	2P(1,2)	1		TB5			
23	R01 29H 255	FAN MOTOR CAPACITOR	2.5μF 400V	1		C1			
24	-	CONTROLLER CASE		1	(BG25J542H04)				
25	T7W 58K 310	INDOOR CONTROLLER BOARD		1		I.B			
26	T7W 520 239	FUSE	250V 6.3A	1		F1<I.B>			
27	T7W 580 799	TRANSFORMER		1		T			
28	R01 J07 202	ROOM TEMPERATURE THERMISTOR		1		RT1			
29	-	BELL MOUTH		1	(BG00N936G07)				
30	-	ELECTRICAL PARTS COVER		1	(RG00C610G01)				
31	R01 08K 097	SPL WASHER		1					
⑬	R01 A48 524	DRAIN PLUG		1					
⑭	R01 005 533	SENSOR HOLDER		1					
⑮	S70 A00 675	FAN GUARD		1					

Part numbers that are circled not shown in the figure.

Mr. SLIM™

 **MITSUBISHI ELECTRIC CORPORATION**
HEAD OFFICE MITSUBISHI DENKI BLDG. MARUNOUCHI TOKYO100 TELEX J24532 CABLE MELCO TOKYO