1. Mobile Air-conditioner (KY-20)

1.1 Summary

figure 1-1

MODEL	NOTE
KY-20/(2001)	CE STANDARD 1Ph 220-230V 50Hz R22
KY-20N/(2001) KY-20N/A KY-20N/B	CE STANDARD 1Ph 220-230V 50Hz R407C
KY-20U/11156 KY-20U/A-11156 KY-20U/B-11156	UL STANDARD 1Ph 115V 60Hz R22
GP8-12L	1Ph 115V 60Hz R22
GP8-22L	1Ph 220V 60Hz R22

1.2 Technical specifications.

Table 1-1

Item \ Model				KY-20/(2001)	KY-20/(2001)
Function				Cooling	
Power source(PH-Hz-V)				1Ph 220~230V-50Hz	
Capacity			Kcal/h	1720	
			Btu/h	6826	
			W	2000	
Power input			W	800	760
Current			A	3.5	
Air volume	Front side		m^3/h	290	
	Rear side		m^3/h	340	
Dehumidifying capacity			L/h	1.5	1.3
C.O.P.				2.63	
Upper fan speed			r/min	1070/1010/940/900 (± 30)	
Power output			W	9	
Fan capacitor μF				1.5	
Upper fan type-pcs				Centrifugal fan--1	
Upper fan diameter length (mm-mm)				ϕ 146-160	
Evaporator				Tin fin copper type	
Rows-distance				3-1.5	
Working area(m^2)				2.7	
Swing motor				SM007U	
Power-speed (W-r/min)				4-4.1	
Control type				Manual	
Fuse A				Controller 3.15 Transformer 1	
Working capacitor(μF)				0.01	
Condenser				Tin fin copper type	
Rows-fin distance				2-1.5	
Working area(m^2)				7.2	
Compressor				Sealed rotated type	
Model				2P14S225ANJ	C-1R62H4J
Power			W	625	
Protect device				MRA99025	MRA99094
Start method				P.C.S	
Current			A	3.1	
Working temp.				Discharge temp.⩽115℃	
Compressor capacitor			μF	30	20(± 5%)
Lower fan speed			r/min	1120 ± 30	
Power output				23	
Working capacitor			μF	3	
Lower fan type-pcs				Centrifugal fan-1	
Lower fan diameter-length (mm-mm)				ϕ 196-82	
Throttling method				Capillary	
Noise dB(A)				51.5	
Dimensions		Width	mm	326	
		Depth	mm	415	
		Height	mm	788	
Net weight			Kg	32	
Refrigerant				R22	
Refrigerant charge			Kg	0.55	0.51

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Table 1-2

Item \ Model			KY-20N/(2001)
Function			Cooling
Power source(PH-Hz-V)			1Ph 220~230V-50Hz
Capacity		Kcal/h	1720
		Btu/h	6826
		W	2000
Power input		W	860
Current		A	3.7
Air volume	Front side	m^3/h	290
	Rear side	m^3/h	340
Dehumidifying capacity		L/h	1.3
C.O.P.			2.32
Upper fan speed		r/min	1070/1010/940/900 (± 30)
Power output		W	9
Fan capacitor μF			1.5
Upper fan type-pcs			Centrifugal fan--1
Upper fan diameter length (mm-mm)			ϕ 146-160
Evaporator			Tin fin copper type
Rows-distance			3-1.5
Working area(m^2)			2.7
Swing motor			SM007U
Power-speed (W-r/min)			4-4.1
Control type			Manual
Fuse A			Controller3.15 Transformer 1
Working capacitor(μF)			0.01
Condenser			Tin fin copper type
Rows-fin distance			2-1.5
Working area(m^2)			7.2
Compressor			Sealed rotated type
Model			C-1RN57H5A
Power		W	700W
Protect device			MRA98730
Start method			P.C.S
Current		A	3.1
Working temp.			Discharge temp.≤ 115℃
Compressor capacitor		μF	15
Lower fan speed		r/min	1120 ± 30
Power output			23
Working capacitor		μF	3
Lower fan type-pcs			Centrifugal fan-1
Lower fan diameter-length (mm-mm)			ϕ 196-82
Throttling method			Capillary
Noise dB(A)			51.5
Dimensions	Width	mm	326
	Depth	mm	415
	Height	mm	788
Net weight		Kg	32
Refrigerant			R407C
Refrigerant charge		Kg	0.63

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Table 1-3

Item \ Model				KY-20N/A	KY-20N/B
Function				Cooling	
Power source(PH-Hz-V)				1Ph 220~230V-50Hz	
Capacity			Kcal/h	1720	
			Btu/h	6826	
			W	2000	
Power input			W	860	
Current			A	3.7	
Air volume	Front side		m^3/h	220	
	Rear side		m^3/h	340	
Dehumidifying capacity			L/h	1.4	
C.O.P.				2.32	
Upper fan speed			r/min	1180/1000	
Power output			W	45	
Fan capacitor μF				3	
Upper fan type-pcs				Centrifugal fan--1	
Upper fan diameter length (mm-mm)				ϕ 146-160	
Evaporator				Tin fin copper type	
Rows-distance				3-1.5	
Working area(m^2)				2.7	
Swing motor				SM007U	
Power-speed (W-r/min)				4-4.1	
Control type				Manual	
Fuse A				Controller3.15 Transformer 1	
Working capacitor(μF)				0.01	
Condenser				Tin fin copper type	
Rows-fin distance				2-1.5	
Working area(m^2)				7.2	
Compressor				Sealed rotated type	
Model				NK134PAE	
Power			W	700	
Protect device				MRA12012-12026	
Start method				PCS	
Current			A	3.3	
Working temp.				Discharge temp.$\leqslant$115℃	
Compressor capacitor			μF	25	
Lower fan speed			r/min	1120	
Power output				23	
Working capacitor			μF	3	
Lower fan type-pcs				Centrifugal fan-1	
Lower fan diameter-length (mm-mm)				ϕ 196-82	
Throttling method				Capillary	
Noise dB(A)				52.5	
Dimensions		Width	mm	326	326
		Depth	mm	415	410
		Height	mm	788	810
Net weight			Kg	32.5	
Refrigerant				R407C	
Refrigerant charge			Kg	0.51	

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Mobile air-conditioner

Table 1-4

Item \ Model			GP8-12L	KY-20U/11156
Function			Cooling	
Power source(PH-Hz-V)			1Ph 115V-60Hz	
Capacity		W	2000	
Power input		W	800	
Current		A	7.0A	
Air volume	Front side	m^3/h	290	
	Rear side	m^3/h	340	
Dehumidifying capacity		L/h	1.3	
C.O.P.			2.5	
Fan speed		r/min	1070/1010/940/900	
Power output		W	9	
Upper fan capacitor(μF)			3	
Upper fan type-pcs			Centrifugal fan--1	
Fan diameter length (mm-mm)			ϕ 146-160	
Evaporator			Tin fin copper type	
Rows-distance			3-1.5	
Working area(m^2)			2.7	
Swing motor			SM007	
Power-speed (W-r/min)			4-4.1	
Control type			Manual	
Fuse A			Controller 3.15 Transformer 1	
Working capacitor μF			0.01	
Condenser			Tin fin copper type	
Rows-fin distance			2-1.5	
Working area(m^2)			7.2	
Compressor			Sealed rotated type	
Model			C-1R51H2E	
Power		W	650	
Protect method			MRA98637-9200	
Start method			PCS	
Current		A	6.0	
Working Capacitor℃			Discharge temp.$\leqslant$ 115℃	
Compressor capacitor		μF	25	
Lower fan speed		r/min	1200	
Power output			23	
Working capacitor		μF	11	
Lower fan type-pcs			Centrifugal fan-1	
Lower fan diameter-length (mm-mm)			ϕ 196-82	
Throttling method			Capillary	
Noise dB(A)			51.5	
Dimensions	Width	mm	326	
	Depth	mm	415	
	Height	mm	788	
Net weight		Kg	32	
Refrigerant			R22	
Refrigerant charge		Kg	0.5	

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Table 1-5

Item \ Model			KY-20U/A-11156	KY-20U/B-11156
Function			Cooling	
Power source(PH-Hz-V)			1Ph 115V-60Hz	
Capacity		Kcal/h	1720	
		Btu/h	6826	
		W	2000	
Power input		W	860	
Current		A	7.5	
Air volume	Front side	m^3/h	220	
	Rear side	m^3/h	340	
Dehumidifying capacity		L/h	1.4	
C.O.P.			2.32	
Upper fan speed		r/min	1180/1000	
Power output		W	45	
Fan capacitor μF			11	
Upper fan type-pcs			Centrifugal fan--1	
Upper fan diameter length (mm-mm)			ϕ 146-160	
Evaporator			Tin fin copper type	
Rows-distance			3-1.5	
Working area(m^2)			2.7	
Swing motor			SM007	
Power-speed (W-r/min)			4-4.1	
Control type			Manual	
Fuse A			Controller3.15 Transformer 0.2	
Working capacitor(μF)			0.01	
Condenser			Tin fin copper type	
Rows-fin distance			2-1.5	
Working area(m^2)			7.2	
Compressor			Sealed rotated type	
Model			QA110CAD	
Power		W	770	
Protect device			MRA12105-12026	
Start method			PCS	
Current		A	6.7	
Working temp.			Discharge temp.$\leqslant$115℃	
Compressor capacitor		μF	40	
Lower fan speed		r/min	1200	
Power output			23	
Working capacitor		μF	11	
Lower fan type-pcs			Centrifugal fan-1	
Lower fan diameter-length (mm-mm)			ϕ 196-82	
Throttling method			Capillary	
Noise dB(A)			52.5	
Dimensions	Width	mm	326	326
	Depth	mm	415	410
	Height	mm	788	810
Net weight		Kg	32.5	
Refrigerant			R22	
Refrigerant charge		Kg	0.52	

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Table 1-6

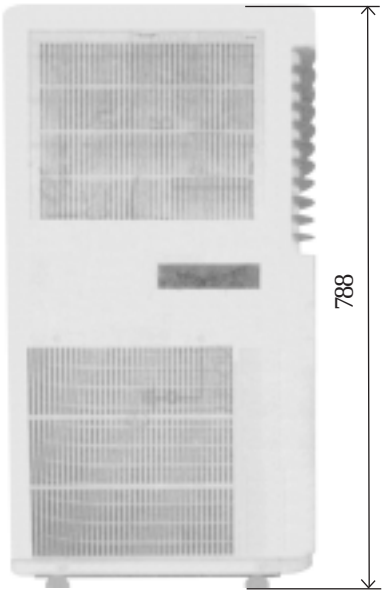
Item \ Model				GP8-22L
Function				Cooling
Power source(PH-Hz-V)				1Ph 220~230V-50Hz
Capacity			W	2000
Power input			W	760
Current			A	3.5
Air volume	Front side		m^3/h	290
	Rear side		m^3/h	340
Dehumidifying capacity			L/h	1.3
C.O.P.				2.63
Upper fan speed			r/min	1070/1010/940/900
Power output			W	9
Upper fan capacitor μF				2.5
Upper fan type-pcs				Centrifugal fan--1
Fan diamete length (mm-mm)				ϕ 146-160
Evaporator				Tin fin copper type
Rows-distance				3-1.5
Working area(m^2)				2.7
Swing motor				SM007U
Power-speed (W-r/min)				4-4.1
Control type				Manual
Fuse A				3.15/0.2
Working capacitor μF				0.01
Condenser				Tin fin copper type
Rows-fin distance				2-1.5
Working area(m^2)				7.2
Compressor				Sealed rotated type
Model				C-1R50H6K
Power			W	625
Protect method				MRA98635
Start method				PSC
Current			A	3.3
Working capacitor ℃				Discharge temp.⩽115℃
Compressor capacitor			μF	17.5
Lower fan speed			r/min	1200
Power output				23
Working capacitor			μF	2.5
Lower fan type-pcs				Centrifugal fan-1
Lower fan diameter-length (mm-mm)				ϕ 196-82
Throttling method				Capillary
Noise dB(A)				51.5
Dimensions		Width	mm	326
		Depth	mm	415
		Height	mm	788
Net weight			Kg	32
Refrigerant				R22
Refrigerant charge			Kg	0.53

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

1.3 Outlines and dimensions

Front

Rear



Left-side

Right-side

figure 1-2

1.4 Explosive view

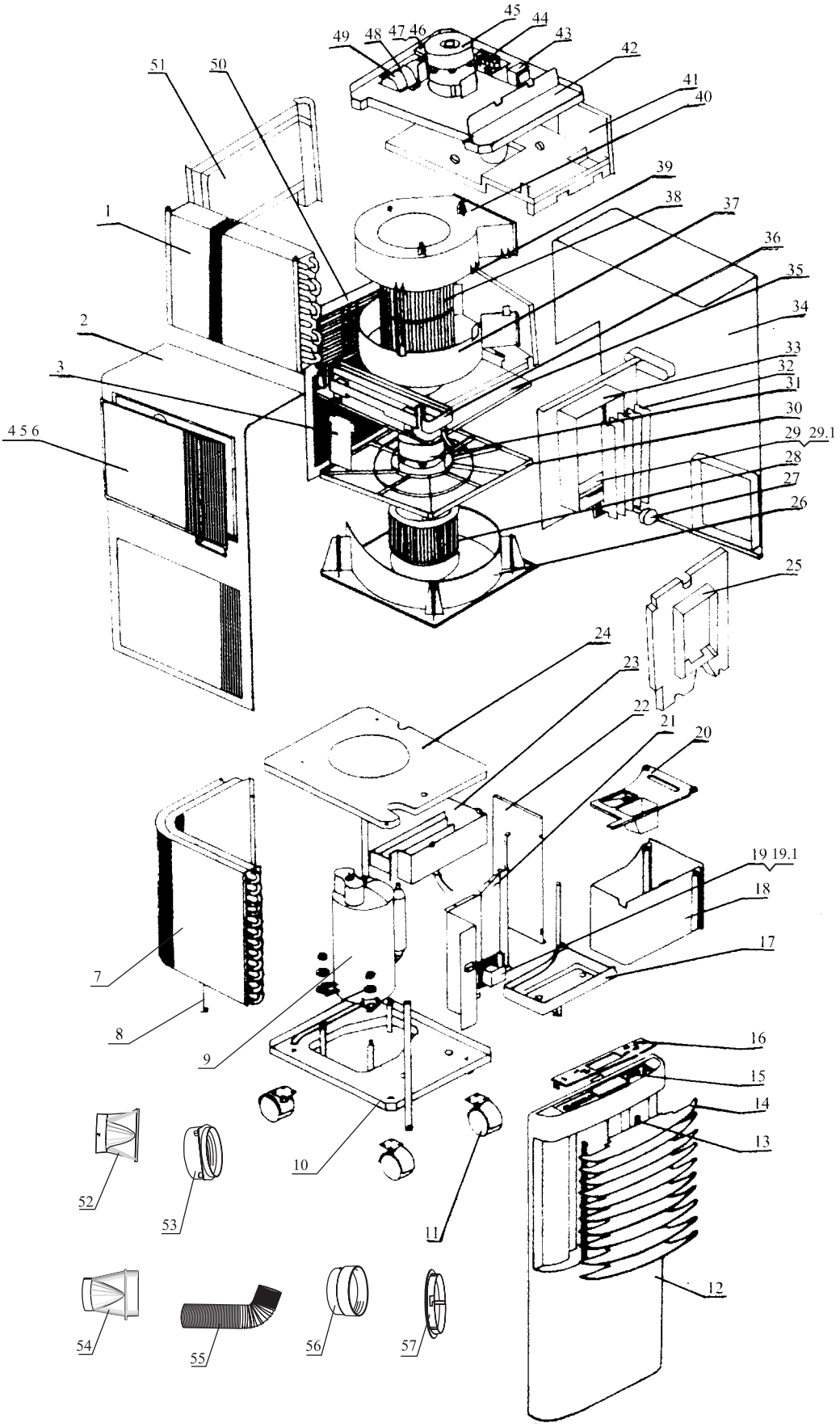


figure 1-3

1.5 Spare parts list

Table 1-7

No.	Description		Part No.						Qty
			KY-20/(2001)	KY-20/(2001)	KY-20N/(2001)	KY-20U/11156	GP8-12L	GP8-22L	
1	evaporator	蒸发器组件	01036001	01036001	01036001	01036001	01036001	01036001	1
2	left case	左侧板	20056022	20056022	20056022	20056020	20056022	20056022	1
	or	或	20056023	20056023	20056023	\	20056023	20056023	1
3	connection sheet	连接板	01386001	01386001	01386001	01386001	01386001	01386001	2
4	filter grill	过滤栅	22416002	22416002	22416002	22416002	22416002	22416002	1
	or	或	22416003	22416003	22416003	22416003	22416003	22416003	1
5	filter	过滤网	11126003	11126003	11126003	111260031	11126003	11126003	1
	or	或	11126001	11126001	11126001	\	11126001	11126001	1
6	filter fixer	过滤网卡片	26116012	26116012	26116012	26116012	26116012	26116012	6
7	condenser	冷凝器组件	01136011	01136011	01136011	01136011	01136011	01136011	1
8	supporting strip	支承架	01796002	01796002	01796002	01796002	01796002	01796002	4
9	compressor C-1R62H4J	压缩机及配件 C-1R62H4J (VDE)	00100312	\	\	\	\	\	1
	compressor 2P14S225ANJ	压缩机及附件 2P14S225ANJ	\	00100005	\	\	\	\	1
	compressor C-1R50H6K	压缩机及附件 C-1R50H6K	\	\	\	\	\	00100307	1
	compressor C-1R51H2E	压缩机及附件 C-1R51H2E	\	\	\	00100308	00100308	\	1
	compressor C-1RN57H5A	压缩机及附件 C-1RN57H5A	\	\	00100337	\	\	\	1
10	base assy	底盘	01216002	01216002	01216002	01216002	01216002	01216002	1
11	castor	脚轮	24236051	24236051	24236051	24236051	24236051	24236051	4
12	front panel	前面框	26116005	26116005	26116005	26116004	26116005	26116005	1
	or	或	26116006	26116006	26116006	\	26116006	26116006	1
13	guide louver conjunction	导风连杆	10586002	10586002	10586002	10586001	10586002	10586002	2
14	air guide louver	导风叶片	10516003	10516003	10516003	10516002	10516003	10516003	10
	or	或	10516004	10516004	10516004	\	10516004	10516004	10
	or	或	10516005	10516005	10516005	\	10516005	10516005	10
15	LCD support	控制器液晶支架	24216221	24216221	24216221	24216221	24216221	24216221	1
16	PCB support	P 板固定架组件	24226002	24226002	24226002	24226002	24226002	24226002	1
17	drain tank base	水箱底板	22226001	22226001	22226001	22226001	22226001	22226001	1
18	drain tank	水箱组件	20186005	20186005	20186005	20186005	20186005	20186005	1
19	switch assy	开关盒组件	20106004	20106004	20106004	20106004	20106004	20106004	1
19.1	level switch	移动空调水位开关	45026001	45026001	45026001	45026001	45026001	45026001	1
20	drain tank cover	水箱盖	22246002	22246002	22246002	22246002	22246002	22246002	1
21	back insulation plate	底隔板组件	01236011	01236011	01236011	01236011	01236011	01236011	1
22	compressor protection plate	压缩机护板组件	01496002	01496002	01496002	01496002	01496002	01496002	1
23	condenser tray	冷凝器水槽组件	06126002	06126002	06126002	06126002	06126002	06126002	1
24	condenser cover	冷凝器盖板组件	01176011	01176011	01176011	01176011	01176011	01176011	1
25	foam of outlet grill	出风栅泡沫	52016104	52016104	52016104	52016104	52016104	52016104	1
26	lower insulation plate	下隔板组件	20056031	20056031	20056031	20056031	20056031	20056031	1
27	swing motorSM007U	同步电机 SM007U	15216001	15216001	15216001	\	\	15216001	1
	swing motor SM007	同步电机 SM007	\	\	\	15210207	15210207	\	1
28	lower centrifugal fan	下离心风叶组件	10316009	10316009	10316009	10316009	10316009	10316009	1
29	wing louver conjunction	扫风连杆	10586008	10586008	10586008	10586007	10586008	10586008	1
29.1	axes	扫风转轴	10566002	10566002	10566002	10566001	10566002	10566002	1
30	middle insulation plate	中隔板组件	20056029	20056029	20056029	20056029	20056029	20056029	1
31	lower motor YD23D	下电机 YD23D	15016007	15016007	15016007	\	\	\	1

Table 1-7 continue

No.	Description		Part No.						Qty
			KY-20/(2001)	KY-20/(2001)	KY-20N/(2001)	KY-20U/11156	GP8-12L	GP8-22L	
31	lower motor YD23C	电机YD23C	\	\	\	\	\	15016005	1
	lower motor YD23E	电机YD23E	\	\	\	15016008	15016008	\	1
32	swing louver	扫风叶片	10516029	10516029	10516029	10516028	10516029	10516029	5
33	air outlet grill	前出风栅	22416004	22416004	22416004	22416004	22416004	22416004	1
34	right case	右侧板	20056015	20056015	20056015	20056013	20056015	20056015	1
	or	或	20056016	20056016	20056016	\	20056016	20056016	1
35	inside supporting plate	中支撑板	01796001	01796001	01796001	01796001	01796001	01796001	1
36	lower foam of duct	风道下泡沫组件	12316010	12316010	12316010	12316010	12316010	12316010	1
37	lower propeller house	下蜗壳	22206002	22206002	22206002	22206002	22206002	22206002	1
38	upper centrifugal fan	上离心风扇组件	10316008	10316008	10316008	10316008	10316008	10316008	1
	or	或	10316005	10316005	10316005	10316005	10316005	10316005	1
39	fan nesting	风扇嵌件	10316002	10316002	10316002	10316002	10316002	10316002	1
40	upper propeller	上蜗壳	22206001	22206001	22206001	22206001	22206001	22206001	1
41	upper foam of duct	风道上泡沫	12316201	12316201	12316201	12316201	12316201	12316201	1
42	upper insulation plate	上隔板	20056025	20056025	20056025	20056024	20056025	20056025	1
43	transformer SC24V1	电源变压器 SC24V1	\	\	\	\	\	43110166	1
	transformer SC24(130℃)	电源变压器 SC24(115℃)	43110165	43110165	43110165	\	\	\	1
	transformer SC24B	电源变压器SC24B	\	\	\	\	43110192	\	1
	transformer SC24V3(130℃)	电源变压器 SC24V3(130℃)	\	\	\	43110008	\	\	1
44	PCB	控制器6601A(M)	30026002	30026002	30026002	\	\	\	1
	PCB 6601D(M)	控制器 6601D(M)	\	\	\	\	\	30026005	1
	PCB 6601C(M)	控制器 6601C(M)	\	\	\	\	30026003	\	1
	PCB 6601CF	控制器 6601CF	\	\	\	30026004	\	\	1
45	upper motor YD9D	上电机 YD9D	15016003	15016003	15016003	\	\	\	1
	upper motor YD9C	上电机YD9C	\	\	\	\	\	15016001	1
	upper motor YD9E	上电机YD9E	\	\	\	15016004	15016004	\	1
46	upper motor capacitor	上风机电容 1.5uF/450V(VDE)	33010020	33010020	33010020	\	\	33010020	1
	upper motor capacitor	上风机电容 3uF/450VAC	\	\	\	33000010	33000010	\	1
47	lower motor capacitor	下风机电容 3uF/450V(VDE)	33010027	33010027	33010027	\	\	\	1
	lower motor capacitor	下风机电容 2.5uF/450VAC	\	\	\	\	\	33010019	1
	lower motor capacitor	下风机电容 11uF/300VAC	\	\	\	33000011	33000011	\	1
48	capacitor clamp	电容夹	02146002	02146002	02146005	02146004	02146001	02146004	1
49	compressor capacitor 20uF/450V(VDE)	压缩机电容 20uF/450V(VDE)	33010729	\	\	\	\	\	1
	compressor capacitor 20uF/450V(VDE)	压缩机电容 30uF/450V	\	33000021	\	\	\	\	1
	compressor capacitor 17.5uF/400VAC	压缩机电容 17.5uF/400VAC	\	\	\	\	\	33010731	1
	compressor capacitor 25uF/450VAC	压缩机电容 25uF/450VAC	\	\	\	\	33000017	\	1
	compressor capacitor 15uF/450VAC	压缩机电容 15uF/450VAC	\	\	33010728	\	\	\	1
	compressor capacitor 25uF/330VAC	压缩机电容 25uF/330VAC(UL)	\	\	\	33000025	\	\	1
50	rear case	后板组件	20006006	20006006	20006006	20006006	20006006	20006006	1

Table 1-7 continue

No.	Description		Part No.						Qty
			KY-20/(2001)	KY-20/(2001)	KY-20N/(2001)	KY-20U/11156	GP8-12L	GP8-22L	
51	rear foam of duct	风道后泡沫	12316202	12316202	12316202	12316202	12316202	12316202	1
52	front plastic pipe end	前接头	06646001	06646001	06646001	06646001	06646001	06646001	1
	or	或	06646006	06646006	06646006	06646006	06646006	06646006	1
53	plastic pipe end	后接头	06646002	06646002	06646002	06646002	06646002	06646002	1
	or	或	06646007	06646007	06646007	06646007	06646007	06646007	1
	fixing ring	后接头安装环	06646010	06646010	06646010	06646010	06646010	06646010	1
54	rear clip	后接卡	26116010	26116010	26116010	26116010	26116010	26116010	1
	or rear clip B	或后接卡 B	26116018	26116018	26116018	26116018	26116018	26116018	1
55	pipe (ϕ 131)	软管（ϕ 131）	05236006	05236006	05236006	05236006	05236006	05236006	1
56	middle plastic pipe end	中接头	06646003	06646003	06646003	06646003	06646003	06646003	1
57	plastic cover	后接盖	22246001	22246001	22246001	22246001	22246001	22246001	1

The data are subject to change without notice.

Table 1-8

No.	Description		Part No.				Qty
			KY-20N/A	KY-20N/B	KY-20U/A-11156	KY-20U/B-11156	
1	evaporator	蒸发器组件	01036002	01036001	01036002	01036001	1
2	left case	左侧板	20056022	20056061	20056020	20056061	1
3	connection sheet	连接板	01386001	01386001	01386001	01386001	2
4	filter grill	过滤栅	22416002	22416002	22416002	22416002	1
5	filter	过滤网	11126003	11126003	111260031	111260031	1
6	filter fixer	过滤网卡片	26116012	26116012	26116012	26116012	6
7	condenser	冷凝器组件	01136012	01136011	01136012	01136011	1
8	supporting strip	支承架	01796002	01796002	01796002	01796002	4
9	compressor NK134PAE	压缩机及配件 NK134PAE	00100055	00100055	\	\	1
	compressor QA110CAD	压缩机及附件 QA110CAD	\	\	00120007	00120007	1
10	base assy	底盘	01216002	01216002	01216002	01216002	1
11	castor	脚轮	24236051	24236051	24236051	24236051	4
12	front panel	前面框	26116005	26116025	26116004	26116025	1
13	guide louver conjunction	导风连杆	10586002	10586002	10586001	10586001	2
14	air guide louver	导风叶片	10516004	10516046	10516002	10516046	10
15	LCD support	控制器液晶支架	\	\	\	\	\
16	PCB support	P 板固定架组件	\	\	\	\	\
17	drain tank base	水箱底板	22226001	22226001	22226001	22226001	1
18	drain tank	水箱组件	20186005	20186005	20186005	20186005	1
19	switch assy	开关盒组件	20106004	20106004	20106004	20106004	1
19.1	level switch	移动空调水位开关	45026001	45026001	45026001	45026001	1
20	drain tank cover	水箱盖	22246002	22246002	22246002	22246002	1
21	back insulation plate	底隔板组件	01236011	01236011	01236011	01236011	1
22	compressor protection plate	压缩机护板组件	01496002	01496002	01496002	01496002	1
23	condenser tray	冷凝器水槽组件	06126002	06126002	06126002	06126002	1
24	condenser cover	冷凝器盖板组件	01176011	01176011	01176011	01176011	1
25	foam of outlet grill	出风栅泡沫	52016104	52016104	52016104	52016104	1
26	lower insulation plate	下隔板组件	20056031	20056031	20056031	20056031	1
27	swing motorSM007U	同步电机 SM007U	15216001	15216001	\	\	1
	swing motor SM007	同步电机 SM007	\	\	15210207	15210207	1
28	lower centrifugal fan	下离心风叶	10316006	10316006	10316006	10316006	1
29	wing louver conjunction	扫风连杆	10586008	10586008	10586007	10586007	1
29.1	axes	扫风转轴	10566002	10566002	10566001	10566001	1
30	middle insulation plate	中隔板组件	20056029	20056029	20056029	20056029	1
31	lower motor YD45U	电机 YD45U	\	\	15016012	15016012	1
	lower motor YD45A	电机 YD45A	15016011	15016011	\	\	1
32	swing louver	扫风叶片	10516029	10516029	10516028	10516028	5
33	air outlet grill	前出风栅	22416004	22416004	22416004	22416007	1
34	right case	右侧板	20056015	20056060	20056013	20056060	1
35	inside supporting plate	中支撑板	01796001	01796001	01796001	01796001	1
36	lower foam of duct	风道下泡沫组件	12316010	12316010	12316010	12316010	1
37	lower propeller house	下蜗壳	22206004	22206004	22206004	22206004	1
38	upper centrifugal fan	上离心风叶	10316004	10316004	10316004	10316004	1
39	fan nesting	风扇嵌件	10316002	10316002	10316002	10316002	1
40	upper propeller	上蜗壳	22206003	22206003	22206003	22206003	1
41	upper foam of duct	风道上泡沫	12316201	12316201	12316201	12316201	1
42	upper insulation plate	上隔板	20056043	20056062	200560431	20056062	1
43	transformer SC24(130℃)	电源变压器 SC24(130℃)	43110165	43110165	\	\	1
	transformer SC24V3(115℃)	电源变压器 SC24V3(115℃)	\	\	43110008	43110008	1

Table 1-8 continue

No.	Description		Part No.				Qty
			KY-20N/A	KY-20N/B	KY-20U/A-11156	KY-20U/B-11156	
44	PCB 7901	控制器 7901	30027044	30027044	\	\	1
	PCB 7901C	控制器 7901C	\	\	30027045	\	1
	PCB 6701C	控制器 6701C	\	\	\	30026746	1
44	Hi-Volt PCB 7901	强电板 7901	\	30000721	\	\	1
	LED Board 6701	显示板 6701	\	30546701	\	\	1
45	upper motor YD9C	上电机YD9C	\	\	\	\	\
46	upper motor capacitor	上风机电容 3uF/450VAC	\	\	\	\	\
47	lower motor capacitor	下风机电容 3uF/450V(VDE)	33010027	33010027	\	\	1
	lower motor capacitor	下风机电容 11uF/300V(UL)	\	\	33000011	33000011	1
48	capacitor clamp	电容夹	02146004	02146004	02146001	02146001	1
49	compressor capacitor 25uF/450V(VDE)(TUV)	压缩机电容 25uF/450V (VDE)(TUV)	33000020	33000020	\	\	1
	compressor capacitor 40uF/300V(UL)	压缩机电容 40uF/300V(UL)	\	\	33010724	33010724	1
50	rear case	后板组件	20006006	20006006	20006006	20006006	1
51	rear foam of duct	风道后泡沫	12316202	12316202	12316202	12316202	1
52	front plastic pipe end	前接头	06646001	06646001	06646001	06646001	1
53	plastic pipe end	后接头	06646002	06646002	06646002	06646002	1
	or	或	06646007	06646007	06646007	06646007	1
	fixing ring	后接头安装环	06646010	06646010	06646010	06646010	1
54	rear clip	后接卡	26116010	26116010	26116010	26116010	1
	or rear clip B	或后接卡 B	26116018	26116018	26116018	26116018	1
55	pipe (ϕ 131)	软管（ϕ 131）	05236006	05236006	05236006	05236006	1
56	middle plastic pipe end	中接头	06646003	06646003	06646003	06646003	1
57	plastic cover	后接盖	22246001	22246001	22246001	22246001	1

The data are subject to change without notice.

1.6 Installation guide

1.Installation of the air filter

Clean the air filter at least once every two weeks to prevent inferior fan operation because of dust.

(1) Pull out the handle of the filter cover and lift it up, see fig 184(a),(b)

(a) Fig. 184 (b)

(2) Take out the air filter from its cover

(3) Wash the air filter by immersing it gently in warm(about 40℃ water with a neutral detergent and dry it thoroughly in a shady place.

a. attach the air filter to the filter cover with the attachment hooks on the inside surface of the cover.

b. Place the nails at the bottom of the filter cover into the holes in the case, then thrust in using the handle.

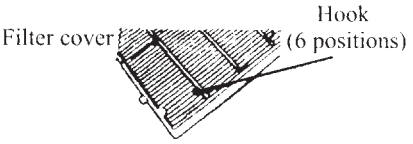


Fig. 185

2. Method of continous drainage

(1) Take out the drain pipe.

(2) Pull out the drainage outlet, see fig 186

don't pull out the drainage outlet except for this application, otherwise the drain will leak.

don't make the continuous drainage outlet clogged to avoid resulting in malfunction.

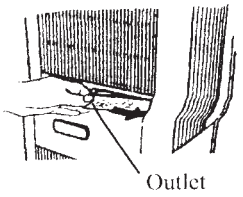


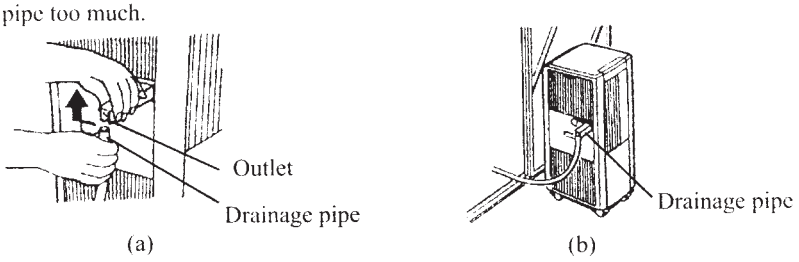
Fig. 186

(3) Hold the continuous drainage outlet and insert the pipe see fig 187(a),(b)
Insert the pipe into the outlet firmly

(4) Drainage

When draining out water, don't press the drainage forcedly especially by the children.

Don't bend the pipe too much.



(a) (b)

Fig. 187

3. Caution

(1) When the unit is operating or just stopped, water will leak out if the outlet is pulled out.Please hold it with rugs and connect the drainage pipe quickly.

(2) When dismantling, please hold the drainage and draw out the pipe.

Optional duct mounting instructions

(1) When cooling, attach one end of the exhaust air outlet of the unit to the dehumidifier air outtake

(2) Attach the other end of the duct to the nearby window, see fig 188,189.

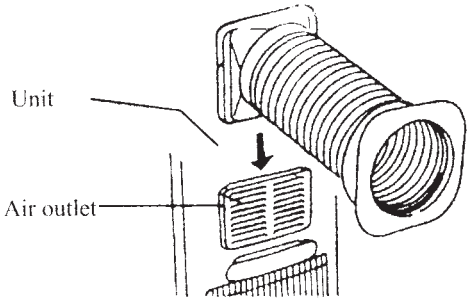


Fig.188

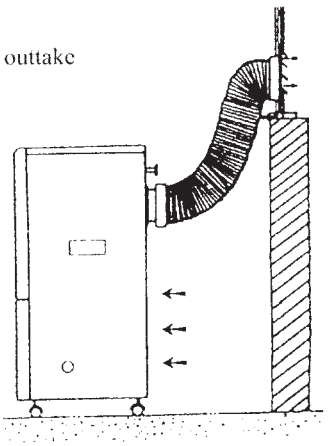


Fig. 189

291

4. Note

try not to connect the exhaust pipe to the unit in dehumidifying operatton
don't put heavy objects or step on the exhaust pipe. or it will be deformed and reduce cooling capacity.
don't bend the pipe more than 2 circles, see fig190
don't connect other pipes to the exhaust pipe, see fig191
don't use the unit in heavy raining and windy days, or the water may be flow inside to cause malfunction.

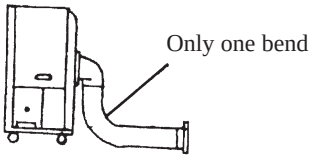


Fig. 190

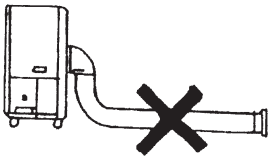
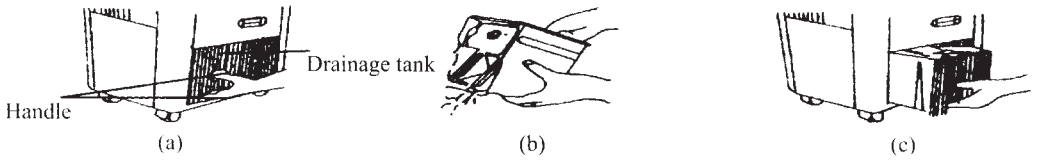


Fig. 191

5. Drainage

(1) When the tank is full, the beep will sound. Be sure to pull out the tank arter 2 minutes.
(2) Empty the tank.
(3) Put the tank back into the unit. See fig.207 (a) (b) (c)



(a) (b) (c)

6. Trouble-shooting

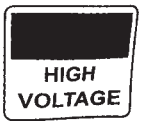
Trouble shooting, see table

No.	Problem	Possible cause	Remedy
1	Unit does not operate when switch on	Power supply is off or abnormal fuse blew out Coppered plate is bad Short circuit in temp. sensor Poor contact between main PCB and power PCB or the output of transformer	Check the power and make sure the voltage is within Replace the fuse Check and repair the copper plate Check and repair the temp..sensor Reweld the output
2	the power indicator is on but unit does not operate	Open circuit in temp. sensor drain tank is ful or short circ-uit in the switch	Check the sensor Empty the tank and check the switch
3	Poor cooling	Leakage of refrigerant Refrigerant system clogged Compressor malfunction	Recharge the refrigerant Clean the system and recharge Replace compressor
4	Much noise	Poor contact between parts Fan axle is not straight Compressor malfunction	Tighten the parts Replace the fan Replace compressor
5	Non-stop when tank is full	Open circuit in switch	Repair the switch
6	Swing fan is not working or abnormal	Poor contact between parts Poor contact in the circuit Swign motor is broken Mechnical resistance force	Fix the parts Reweld welding spots Replace swing motor Repair or replace swing fan axle, conjuction or swing louver
7	LCD is not clear	Poor contact at welding spot LCD malfunction	Check the spot Replace LCD or main PCB

It is normal when the following happens
1. When switch on right after power-off, the compressor indictor will light up but not start after 20-30 seconds.
2. When switch off, the compressor can't start within 3 min. because of the protect function.

Be sure to ask professional technicians to do the repairting work

Cut off the power befor repairing or it will be dangerous.

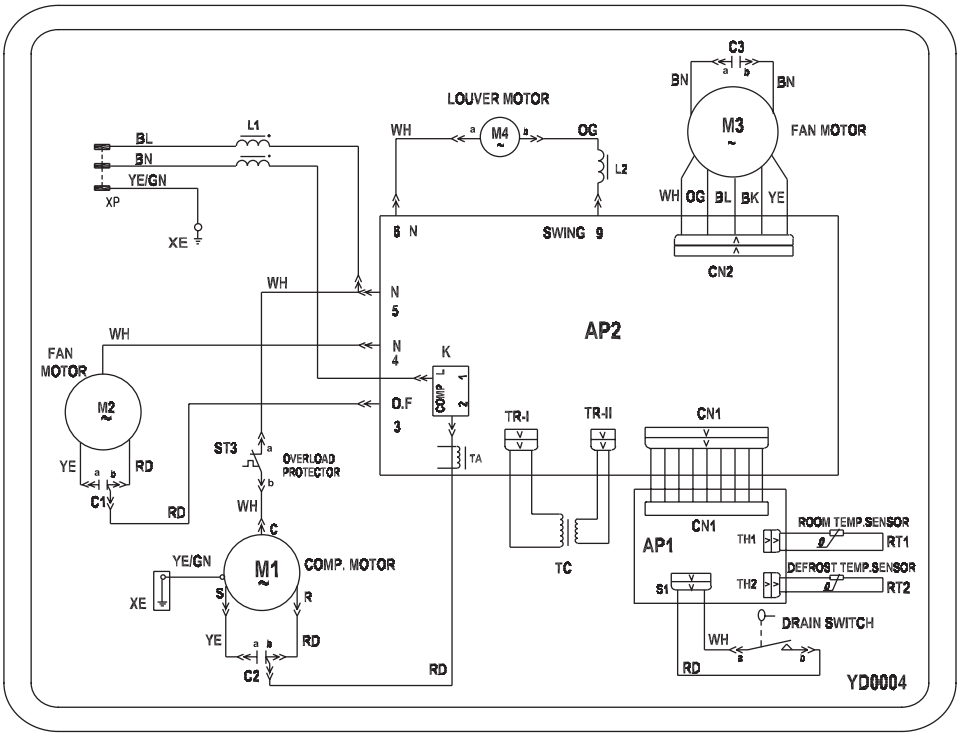


Be cautious of high voltage on terminal board, upper fan motor lower fan motor and compressor.

1.7 Circuit diagram

These circuit diagrams are subject to change without notice.
Please refer to the ones stuck on the machines.

KY-20/(2001)　KY-20N/(2001)



KY-20N/A　　KY-20N/B

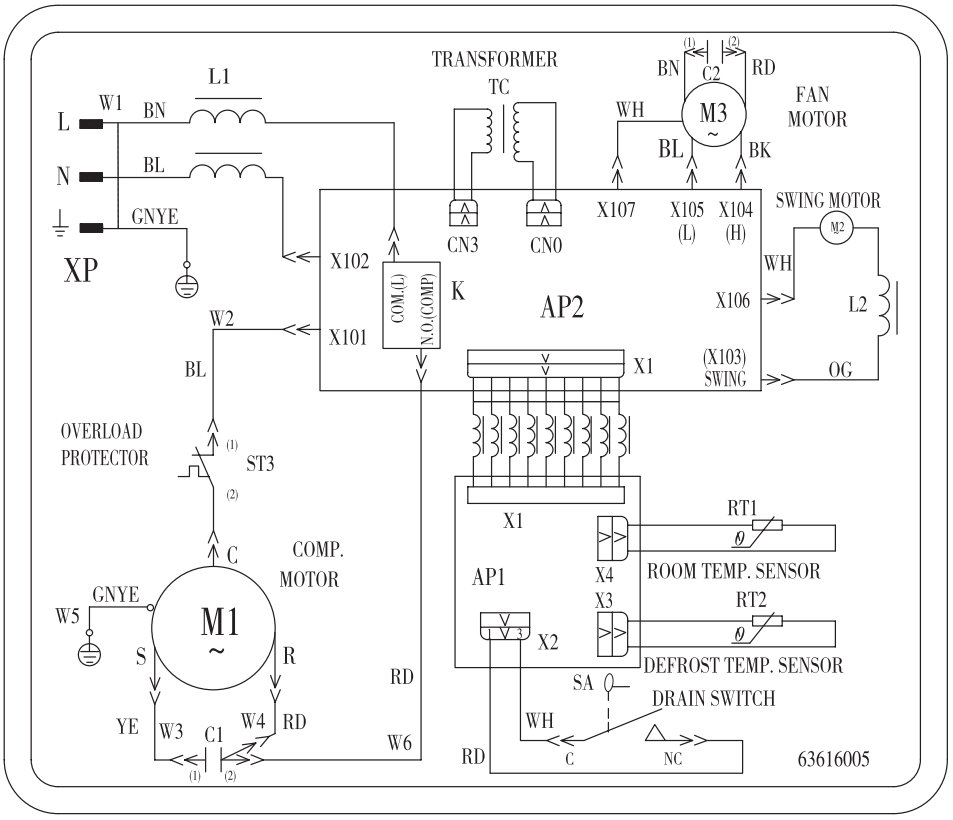
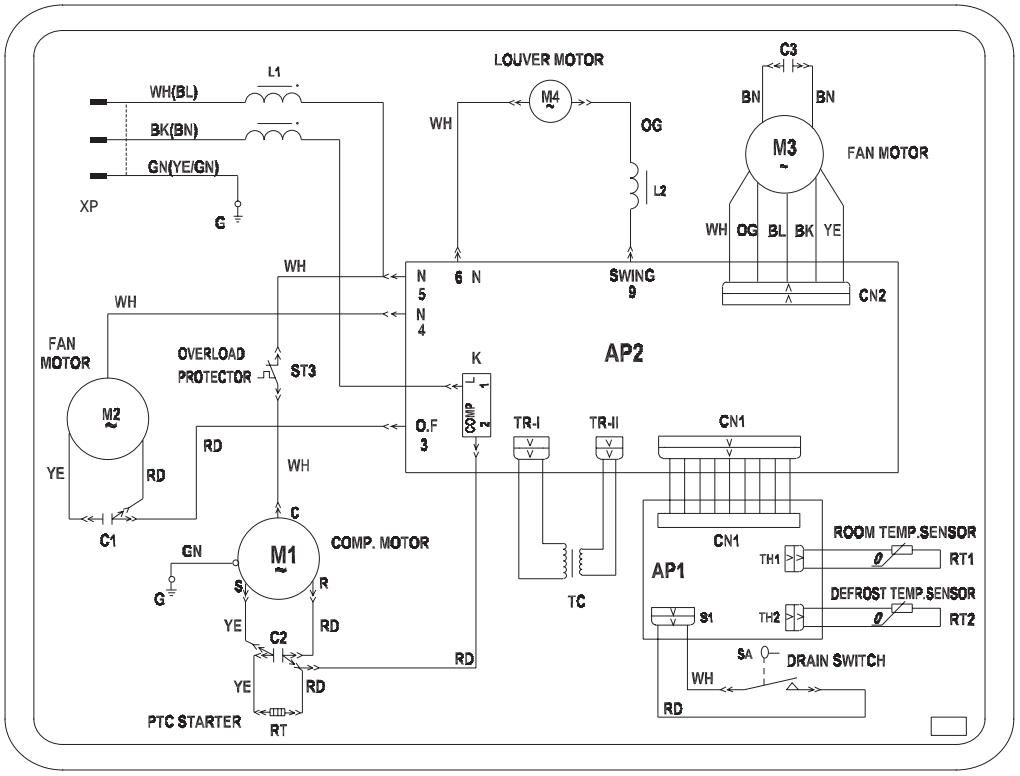


figure 1-4

GP8-12L KY-20U/11156



KY-20U/A-11156

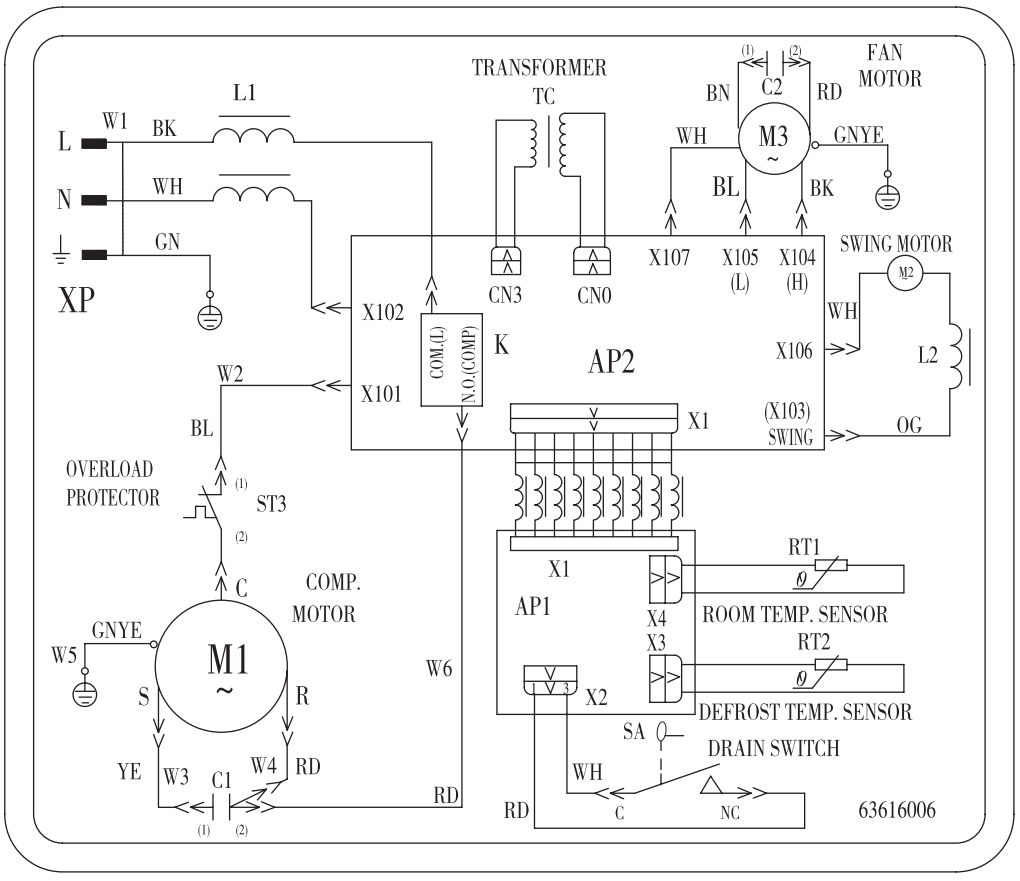
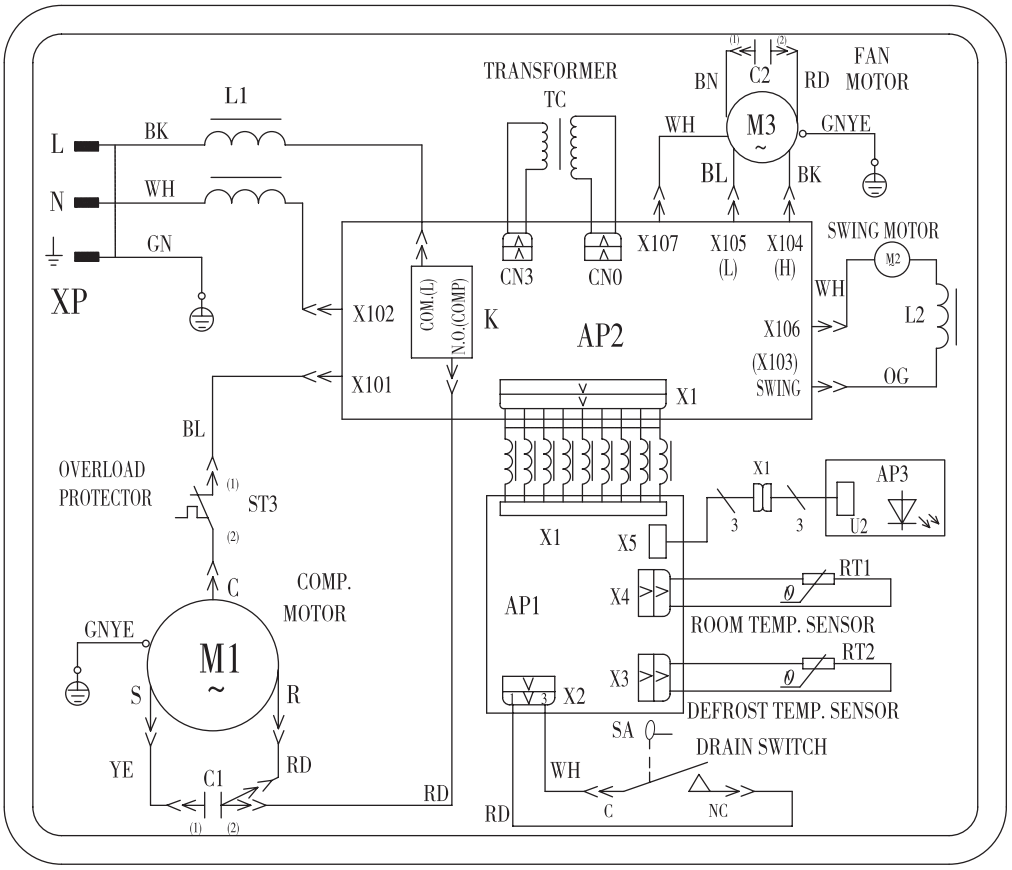


figure 1-5

KY-20U/B-11156



GP8-22L

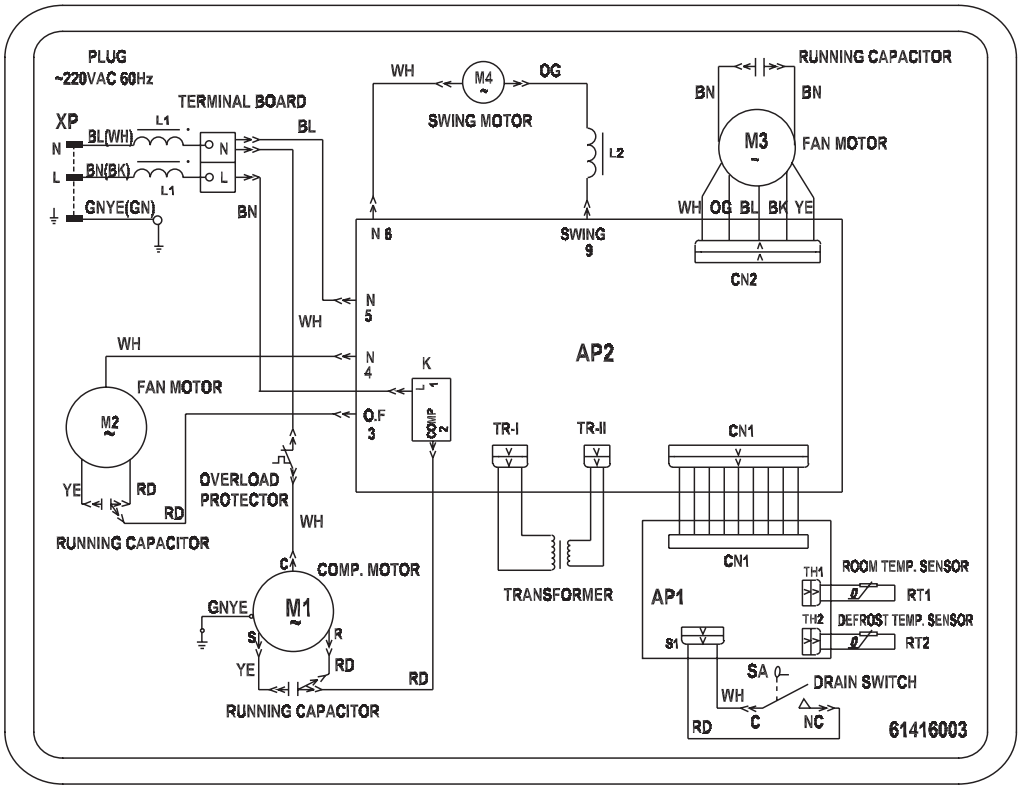


figure 1-6

1.8 PCB function manual

The PCB function manual of the Mobile Air-conditioner

1. Running mode:

1) FAN; 2) COOL; 3) DRY

2. Controlling modes:

1) Control panel

3. The parameter to be input:

1) Analog quantity

① the ambient temperature of the indoor unit(shorten form is TIN)

② the evaporator of the indoor unit (shorten form is Teva)

2) Switch quantity: the switch of the higher water level

3) Controlled input: by the controlling panel

4. The parameter to be output(controlled parameter)

1) Output of the relay

① Indoor fan motor(2-speed)

② Sweep fan motor

③ Compressor

2) Output quantity of LED:

① the light displaying COOL mode(LED1 green)

it is light at the COOL mode, or else goes out

② the light displaying DRY mode(LED2 green)

it is light at the DRY mode, or else goes out

③ the light displaying FAN mode(LED3 green)

it is light at the FAN mode, or else goes out

④ the light displaying indoor fan motor at high speed(LED4 yellow)

it is light when the indoor fan motor is at the high speed , or else goes out

⑤ the light displaying indoor fan motor at low speed(LED5 yellow)

it is light when the indoor fan motor is at the low speed , or else goes out

⑥ the light displaying SWING mode(LED6 green)

it is light when the swing fan motor is running , or else goes out

Flash:

a. Once go into Avoiding freezing mode, the relative LED flashes.

b. When water tank is full, the relative fan speed LED and mode LED flashes.

3) Others

Beeper whistles when turn on unit or press key validly, continuously whistles 8 times when detecting water full.

5. The basal control modes:

A. cooling mode:

1) The cooling conditions and process:

① if 16℃≤ T_{IN} ≤ 45℃, cooling mode act, compressor and fan motor run, relating LED light, if T_{IN} > 45℃, compressor stop, if T_{IN} ≤16℃, compressor and fan motor stop.

② System starts to work, run in this mode, the initial fan speed is high.

2) The protecting functions:

① Avoiding freezing: once the compressor work for 15min,when T_{eva} ≤-2℃ for over 2min, compressor stop, the relative mode LED (about cooling or drying) flashes, After the compressor stops for 4min and T_{eva} ≥8℃, unit comes back to run.

② The protection for the full water:

If the water tank is full, the higher water switch is close, the beeper will alarm “click, click” 8 times, the relative mode LCD (about cooling or drying) and fan speed LCD (about high speed or low speed) flash, after 5sec, compressor stop

③ Delay protection for the compressor:

The distance between 2 times running won’t less than 3min, once the compress work and it will not stop by the changing of the temperature in the next 6min.

B. Drying mode: The indoor fan motor runs in the low speed, compressor and outdoor unit fan motor run continually, the protection functions are same as the cooling mode.

C. Fanning mode: Compressor stop, fan motor run in high or low speed. There is not the protecting for avoiding freezing、for the full water and for the compressor in this mode.

6. Other control

1) Testing functions:

Turn on the unit when the FAST is short circuit, there is no delay protection for compressor and others functions are all same as the normal state.

2) Unit can work normally in the range of AC 215±45V.

There is a short circuit protecting in the circuit.

7. Buttons on the control panel:

If press the button validly, the beeper whistles one times, LCD indicates the relative conditions, system does after 2 seconds.

1) ON/OFF button:

Use it to control the unit on or off, After turn off the unit, only can use the ON/OFF button.

2) MODE button:

Turn on the unit, press this button, unit circularly come into COOL、DRY、FAN mode, the relative mode LCD lights.

3) Fan speed button:

Turn on the unit, in COOL and FAN mode, press this button, switch the high/low speed; in DRY mode, run in low speed, this button is not usable. The relative LCD lights

4) Sweeping button

Turn on the unit, when indoor fan motor is in ON state, press this button to control the sweep fan motor on or off; when indoor fan motor is in OFF state, the same to the sweep fan motor. The relative LCD indicates the SWEEP mode.

2. Mobile Air-conditioner (KY-32)

2.1 Summary

figure 2-1

MODEL	NOTE
KY-32/K101 KYD-32/K101	CE STANDARD 1Ph 220-230V 50Hz R407C
GP12-22L	1Ph-220V 60Hz R22
GP12-12L GP12-12R	1Ph-115V 60Hz R22
KY-32U/11156	UL STANDARD 1Ph-115V 60Hz R22

2.2 Technical specifications.

Table 2-1

Item \ Model			KY-32/K101	KYD-32/K101	GP12-22L
Function			Cooling	Cooling/Heating	Cooling
Power source(PH-Hz-V)			1Ph 220~230V-50Hz		1Ph 220V-60Hz
Capacity	W		2500	2500/2000	3200
Power input	W		1100	1100/2050	1100
Current	A		5	5/9.0	5
Air volume	m^3/h		355		
Dehumidifying capacity	L/h		2.2		
C.O.P.			2.3	2.3	2.3
Upper fan speed	r/min		1100/1020/950		
Power output	W		40		
Fan capacitor	μF		2		3
Upper fan type-pcs			Centrifugal fan--1		
Upper fan diameter length (mm-mm)			ϕ 174-85		
Evaporator			Tin fin copper type		
Rows-distance			2-1.6		
Working area			300 × 290mm		
Swing motor			MP28GA		
Power-speed (W-r/min)			8-4		
Control type			Manual/remote control		
Fuse A			3.15/1		
Working capacitor μF			0.01		
Condenser			Tin fin copper type		
Rows-fin distance			2-1.6		
Working area			500 × 305		
Compressor			Sealed rotated type		
Model			C-RN80H5C		2P14S236A1K
Power			970		950
Protect device	A		MST20ALU-920		MRA99027
Start method			P.C.S		
Current			4.9		4.8
Working temp.			Discharge temp.$\leqslant$115℃		
Compressor capacitor	μF		25		30
Lower fan speed	r/min		760		
Power output	W		35		
Working capacitor			2		3
Lower fan type-pcs			Centrifugal fan-1		
Lower fan diameter-length (mm-mm)			ϕ 210-80		3
Throttling method			Capillary		
Noise dB(A)			52		
Dimensions	Width	mm	450		
	Depth	mm	370		
	Height	mm	856		
Net weight		Kg	45		
Refrigerant			R407C		R22
Refrigerant charge		Kg	0.63		0.56

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

Table 2-2

Item \ Model			GP12-12L	GP12-12R	KY-32U/11156
Function			Cooling	Cooling/Heating	Cooling
Power source(PH-Hz-V)			1Ph 115V-60Hz		
Capacity	W		3200	3200/1000	3200
Power input	W		1200	1200/1050	1200
Current	A		10	10/9.2A	10
Air volume	m^3/h		355		
Dehumidifying capacity	L/h		2.2		
C.O.P.			2.1	2.1	2.1
Upper fan speed	r/min		1100/1020/950		
Power output	W		40		
Fan capacitor	μF		3		
Upper fan type-pcs			Centrifugal fan--1		
Upper fan diameter length (mm-mm)			ϕ 174-85		
Evaporator			Tin fin copper type		
Rows-distance			2-1.6		
Working area			300 $\times$ 290mm		
Swing motor			MP28GA		
Power-speed (W-r/min)			8-4		
Control type			Mannal/remote control		
Fuse A			Controller 3.15 Transformer 1		
Working capacitor μF			0.01		
Condenser			Tin fin copper type		
Rows-fin distance			2-1.6		
Working area			500 $\times$ 305		
Compressor			Scaled rotatcd type		
Model			2P14S126BIP		
Power	W		1000		
Protect device			MRA98694		
Start method			P.C.S		
Current	A		9.2		
Working temp.			Discharge temp $\leqslant$ 115℃		
Compressor capacitor	μF		40		
Lower fan speed	r/min		760		
Power output			35		
Working capacitor			3		
Lower fan type-pcs			Centrifugal fan-1		
Lower fan diameter-length (mm-mm)			ϕ 210-80		
Throttling method			Capillary		
Noise dB(A)			52		
Dimensions	Width	mm	450		
	Depth	mm	370		
	Height	mm	856		
Net weight		Kg	45		
Refrigerant			R22		
Refrigerant charge		Kg	0.62		

The technical data are subject to change without notice .Please refer to the nameplate of the unit.

2.3 Outlines and dimensions

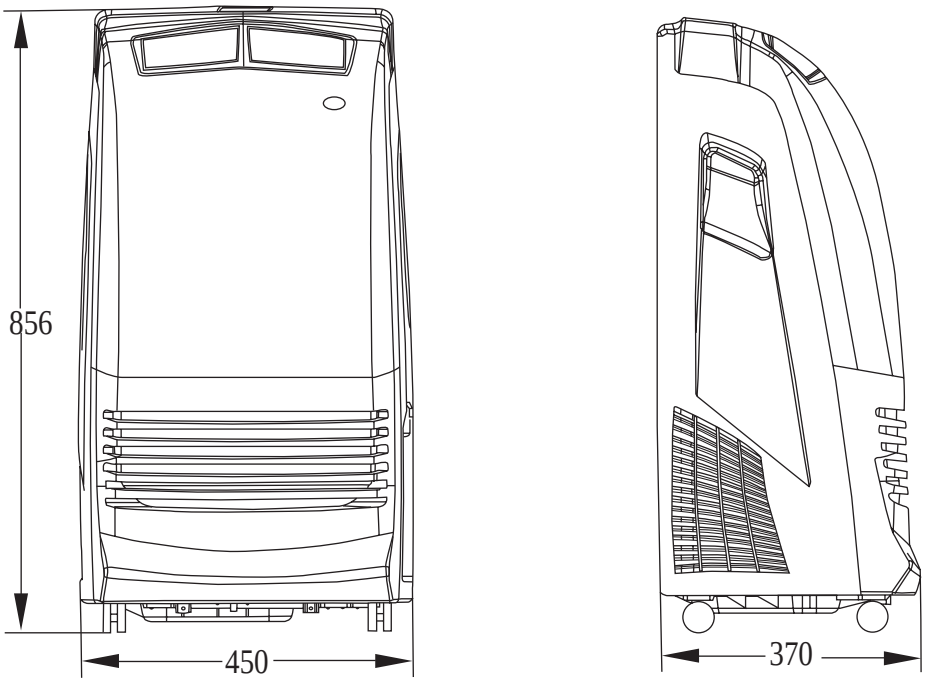


figure 2-2

2.4 Explosive view

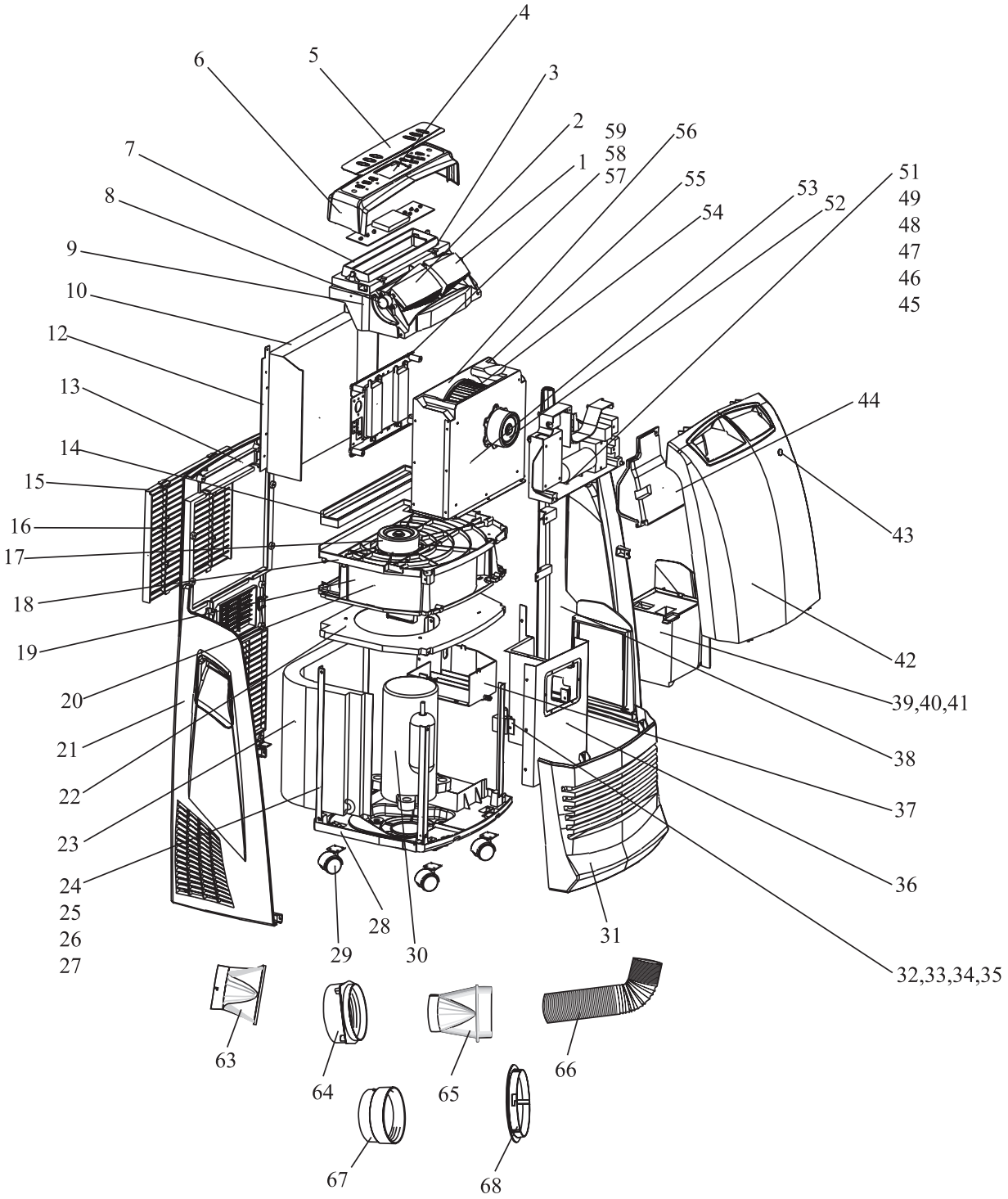


figure 2-3

2.5 Spare parts list

Table 2-3

No.	Description	名称及规格	Part No.						Qty
			KY-32/K101	KYD-32/K101	KY-32U/1115	GP12-12L	GP12-12R	GP12-22L	
1	air outlet grill 1	出风口格栅 1	22416030	22416030	22416033	22416030	22416030	22416030	1
2	air outlet grill 2	出风口格栅 2	22416031	22416031	22416034	22416031	22416031	22416031	1
3	screw cover	螺钉盖	24256001	24256001	24256001	24256001	24256001	24256001	2
4	LCD slide	显示器透明窗	22436201	22436201	22436201	22436201	22436201	22436201	1
5	membrane	面膜	60516084	60516081	60516084	60516084	60516081	60516084	1
6	LCD cover	控制盖板	20126030	20126030	20126030	20126030	20126030	20126030	1
7	LCD foam	控制器泡沫	12416052	12416052	12416052	12416052	12416052	12416052	1
8	swing motor	步进电机 MP28GA	15212103	15212103	15212103	15212103	15212103	15212103	1
9	LCD backseat	控制器座板	26156030	26156030	26156030	26156030	26156030	26156030	1
10	evaporator assy	蒸发器组件	01006021	01006021	01006021	01006021	01006021	01006021	1
11	sensor support	感温头支架	24211121	24211121	24211121	24211121	24211121	24211121	1
12	rear plate	后板	20056053	20056053	20056053	20056053	20056053	20056053	1
13	evaporator tray	蒸发器接水盘组件	12416051	12416051	12416051	12416051	12416051	12416051	1
14	air inlet grill	蒸发器进风栅	22416032	22416032	22416032	22416032	22416032	22416032	1
15	filter	过滤网	11126051	11126051	111260511	11126051	11126051	11126051	1
16	Hooks	过滤网卡片	26116012	26116012	26116012	26116012	26116012	26116012	10
17	lower motor YD23B	下电机 YD23B	15016021	15016021	\	\	\	\	1
	lower motor YD23H	下电机 YD23H	\	\	15316001	15316001	15316001	\	1
	lower motor YD17A	下电机 YD17A	\	\	\	\	\	15016024	1
18	middle insulation plate	中隔板	20056054	20056054	20056056	20056054	20056054	20056054	1
19	lower fan	下风叶	11516031	11516031	11516033	11516031	11516031	11516031	1
20	lower propeller house	下蜗壳	12316030	12316030	12106030	12316030	12316030	12316030	1
21	left side plate	左侧板	20056051	20056051	20056051	20056051	20056051	20056051	1
22	lower insulation plate	下隔板	01236020	01236020	01236020	01236020	01236020	01236020	1
23	condenser assy	冷凝器组件	01106021	01106021	01106021	01106021	01106021	01106021	1
24	support pole 1	支承条 1	02116020	02116020	02116020	02116020	02116020	02116020	1
25	support pole 2	支承条 2	02116021	02116021	02116021	02116021	02116021	02116021	1
26	support pole 3	支承条 3	02116022	02116022	02116022	02116022	02116022	02116022	1
27	support pole 4	支承条 4	02116023	02116023	02116023	02116023	02116023	02116023	1
28	base assy	底盘	22226030	22226030	22226032	22226030	22226030	22226030	1
	or	底盘	\	\	22226031	\	\	\	1
29	castor	脚轮	24236051	24236051	24236051	24236051	24236051	24236051	4
30	compressor C-RN80H5C	压缩机及附件 C-RN80H5C	00120107	00120107	\	\	\	\	1
	compressor 2P14S126BIP	压缩机及附件 2P14S126BIP	\	\	00100002	00100002	00100002	\	1
	compressor 2P14S236A1K	压缩机及附件 2P14S236A1K	\	\	\	\	\	00100266	1
31	lower front panel	下面板	20006031	20006031	20006031	20006031	20006031	20006031	1
32	block 1	挡块一	26216505	26216505	26216505	26216505	26216505	26216505	1
33	block 2	挡块二	26216506	26216506	26216506	26216506	26216506	26216506	1
34	switch piece	开关	45016501	45016501	45016501	45016501	45016501	45016501	1
35	level switch	抽湿机水位开关	45020151	45020151	45020151	45020151	45020151	45020151	1
36	bottom insulation plate	底隔板组件	01236022	01236022	01236022	01236022	01236022	01236022	1
37	cindenser tray	冷凝器水槽部件	06126021	06126021	06126021	06126021	06126021	06126021	1
38	right side plate	右侧板	20056050	20056050	20056050	20056050	20056050	20056050	1
39	drain tank side plate	水箱侧板	20056052	20056052	20056052	20056052	20056052	20056052	1
40	drain tank	水箱组件	22246020	22246020	22246020	22246020	22246020	22246020	1
41	drain tank cover	水箱盖组件	22246022	22246022	22246022	22246022	22246022	22246022	1
42	upper front panel	上面板	20006030	20006030	20006033	20006030	20006030	20006030	1

Table 2-3 continue

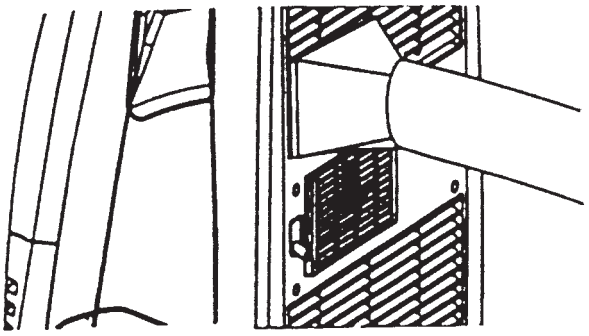
No.	Description	名称及规格	Part No.						Qty
			KY-32/K101	KYD-32/K101	KY-32U/1115	GP12-12L	GP12-12R	GP12-22L	
43	remote control window	遥控红外窗	22436030	22436030	22436030	22436030	22436030	22436030	1
44	electric box cover	电器盒盖	20106031	20106031	20106033	20106031	20106031	20106031	1
45	electric box	电器盒	20106030	20106030	20106032	20106030	20106030	20106030	1
46	transformer SC24V1	电源变压器 SC24V1	\	\	\	\	\	43110166	1
	transformer SC24(130℃)	电源变压器 SC24(130℃)	43110165	43110165	\	\	\	\	1
	transformer SC24V3/115℃	电源变压器 SC24V3/115℃	\	\	43110008	\	\	\	1
	transformer SC24B	电源变压器 SC24B	\	\	\	43110192	43110192	\	1
47	PCB 7863A	控制器 7863A	\	30027030	\	\	\	\	1
	PCB 7861CF （GR78B）	控制器7861CF(GR78B)	\	\	30027027	\	\	\	1
	PCB 7861C	控制器 7861C	\	\	\	30027026	\	\	\
	PCB 7863C	控制器 7863C	\	\	\		30027031	\	1
	PCB 7861A	控制器 7861A	30027025	\	\		\	30026021	1
48	terminal board	接线板 2-5	42011106	42011106	\	42011106	42011106	42011106	1
	terminal board	接线板（UL）	\	\	42011218	\	\	\	1
49	fan capacitor 2uF/450V	电容 2uF/450V	33010025	33010025	\		\	\	2
	fan capacitor 3uF/450V	电容 3uF/450V	\	\	33000010	33000010	33000010	33010021	2
50	compressor capacitor 30uF/450(440)V	电容 30uF/450(440)V	\	\	\	\	\	33000018	1
	compressor capacitor 25uF/450V	电容 25uF/450V (TUV.VDE)	33000020	33000020	\	\	\	\	1
	compressor capacitor 40uF/300V	电容 40uF/300V	\	\	33010724	33010724	33010724	\	1
51	magnet ring	磁环	49010104	49010104	49010104	49010104	49010104	49010104	1
52	upper motor YD40B	上电机 YD40B	15016022	15016022	\	\	\	\	1
	upper motor YD40H	上电机 YD40H	\	\	15316002	15316002	15316002	\	1
	upper motor YD12A	上电机 YD12A	\	\	\		\	15016023	1
53	motor backseat plate	电机座板	01336020	01336020	01336020	01336020	01336020	01336020	1
54	upper fan	上风叶	11516030	11516030	11516032	11516030	11516030	11516030	1
55	upper propeller house	泡沫蜗壳	12106051	12106051	12106051	12106051	12106051	12106051	1
56	Flow-guide loop	导流圈	10376020	10376020	10376020	10376020	10376020	10376020	1
57	PTC heater assy	PTC 部件	\	32006020	\	\	32006021	\	1
58	fuse	热熔断体	\	46010363	\	\	46010363	\	1
59	temperature limiter 250VAC15A55℃	限温器 250VAC15A55℃	\	46010509	\	\	46010509	\	1
60	tube sensor	6601 内管温包	39000104	39000104	39000104	39000104	39000104	39000104	1
61	room sensor	6601 内室温包	39000106	39000106	39000106	39000106	39000106	39000106	1
62	remote control Y612A	遥控器 Y612A	30516001	30516001	\	30516001	30516001	30516001	1
	remote control Y612AF	遥控器 Y612AF	\	\	30512602	\	\	\	1
63	front plastic pipe end	前接头	06646001	06646001	06646001	06646001	06646001	06646001	1
64	plastic pipe end	后接头	06646002	06646002	06646002	06646002	06646002	06646002	1
	or	或	06646007	06646007	06646007	06646007	06646007	06646007	1
	fixing ring	后接头安装环	06646010	06646010	06646010	06646010	06646010	06646010	1
65	rear clip	后接卡	26116010	26116010	26116010	26116010	26116010	26116010	1
	or rear clip B	或后接卡 B	26116018	26116018	26116018	26116018	26116018	26116018	1
66	pipe (φ 131)	软管（φ 131）	05236006	05236006	05236006	05236006	05236006	05236006	1
67	middle plastic pipe end	中接头	06646003	06646003	06646003	06646003	06646003	06646003	1
68	plastic cover	后接盖	22246001	22246001	22246001	22246001	22246001	22246001	1

The data are subject to change without notice.

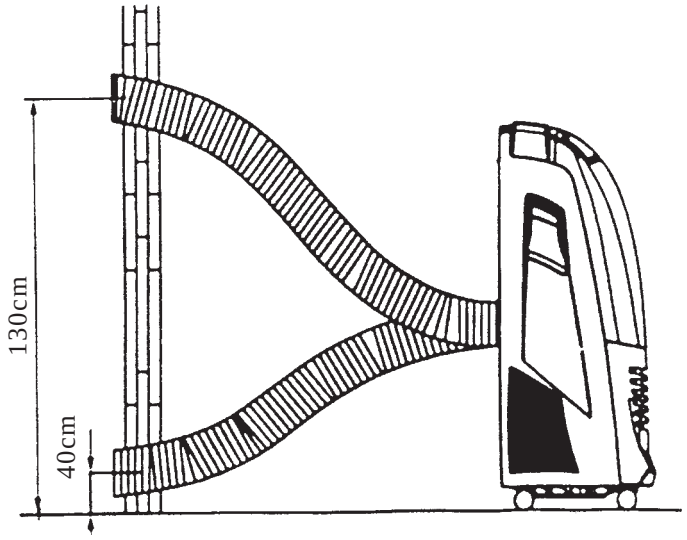
2.6 Installation guide.

1) Fix the square end of the exhaust duct to the exhaust terminal of the unit.
2) Put the other end(discharge) to the nearest window
Attention:
The length of the air exhaust must be between 500mm~2000mm.

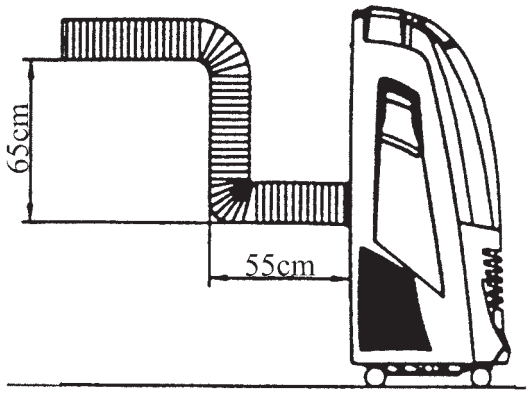
When mounting,try to keep the air exhaust horizonal.

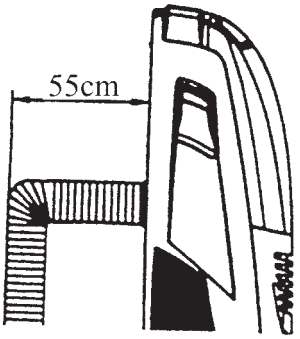


Correct mounting shown below (If mounting in the wall, the height of the hole should be 40cm~130cm)

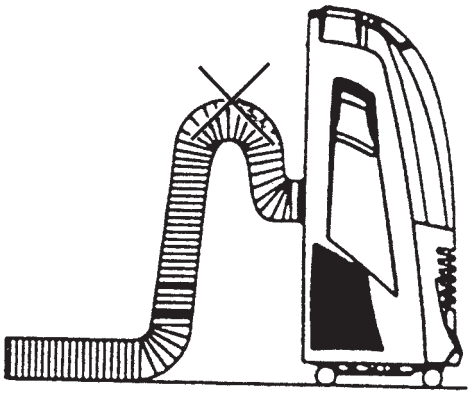


If the air exhaust requires bend, bend as shown as below.



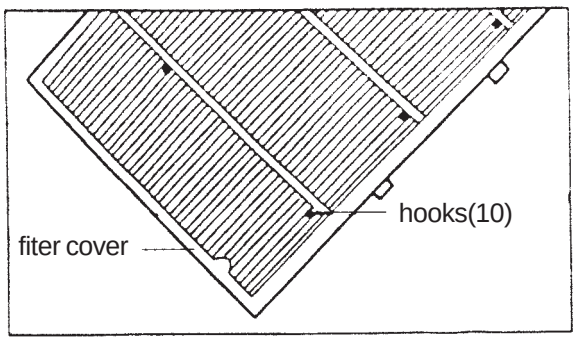


The wrong mounting diagram (Air exhaust bend too large, easily cause malfunction).



2.AIR FILTER

If the air filter is blocked with a lot of dust, the air flow volume will reduce. Clean the filter once every two weeks.



Open the air filter

Open the air filter cover, then take off the air filter, Take the air filter out of filter cover.

Clean

Wash the air filter by immersing it gently into warm (about 40℃) water with a neutral detergent, rinse the filter of detergent and dry it thoroughly in a shaded place.

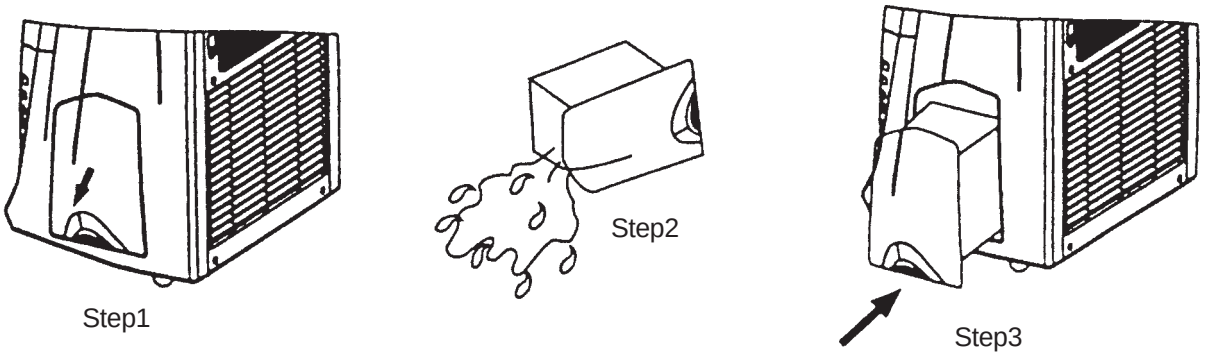
Mounting

Attach the filter to the filter cover with the attachment hooks on the inside surface of the cover. Place the hooks at the bottom of the filter cover into the holes in the case, push it back into its orginal position.

WATER DRAINAGE

When in cooling or dehumidifrying mode, the dew water will drain into the tank, When the tank gets full, the indicator will flash, and the buzzer will sound eight times, LCD window shows error code “E4” at the same time the unit will switch off.

As the step shown in the figure below. Take out the water tank, pour out the water inside the tank, then push it back to its original position.

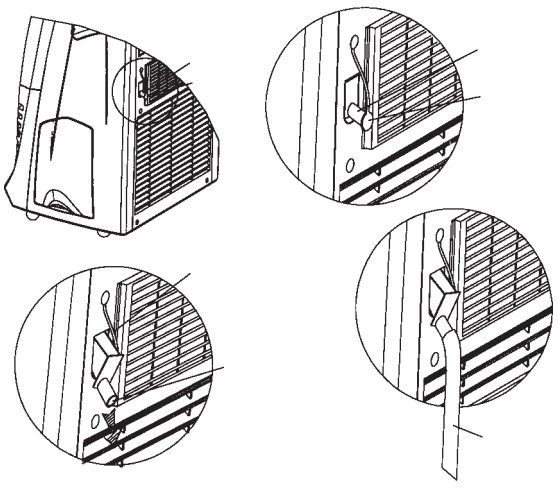


4.CAUTION

1. When in cooling or dehumidifying mode, do not take out the water tank, or the buzzer will sound and the unit will switch off.
2. If you want to take out the tank before it is full of water, please stop the machine first, and wait for 3 minutes to prevent the dew water from spilling into the unit.
3. There is a plastic pipe inside where the tank is placed. Do not remove the stopper while the unit is working because the water is used for cooling the copper tube.
4. Put in the plug of drainage in water drainage method.

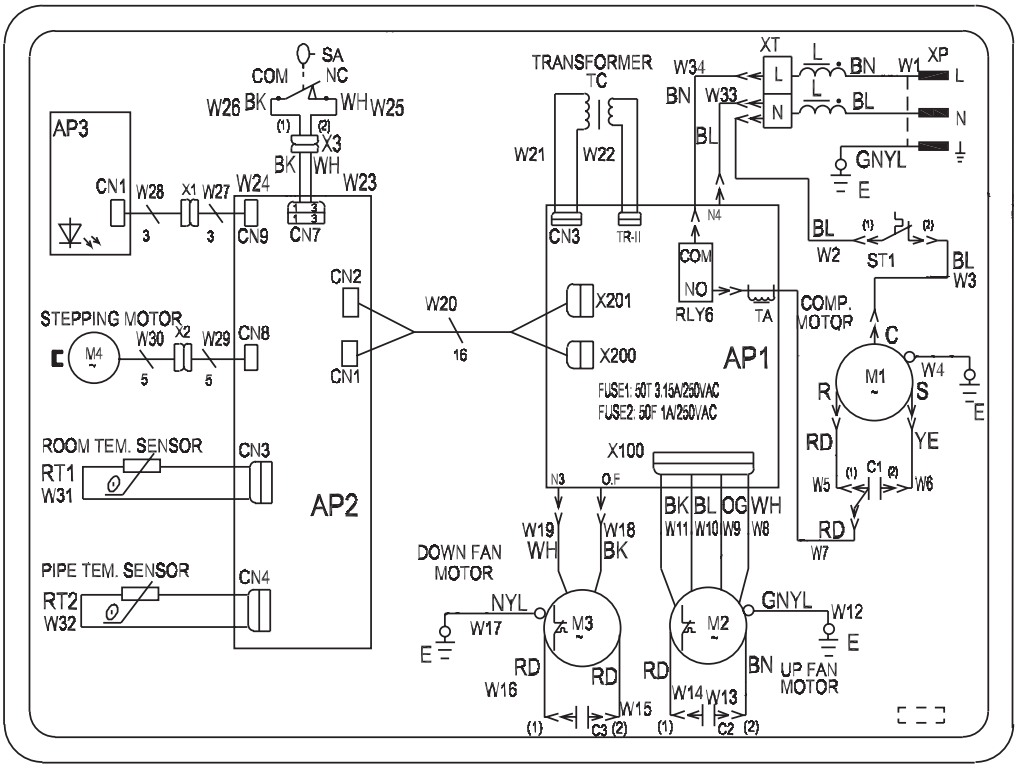
5.METHOD OF CONTINUOUS DRAINAGE

1. Push down the drainage and make it inclined, pull out the plug of drainage.
2. Don’t push down the drainage except for this application, otherwise it will leak.
   Don’t make the continuous drainage clogged.
3. Hold the drainage, then insert the pipe into continuous drainage hole.
4. Drainage
   - When draining out water, don’t press the drainage too forcefully.
   - When draining out water, don’t make bend the pipe.



2.7 Circuit diagram

KY-32/K101 GP12-22L



GP12-12 KY-32U/11156

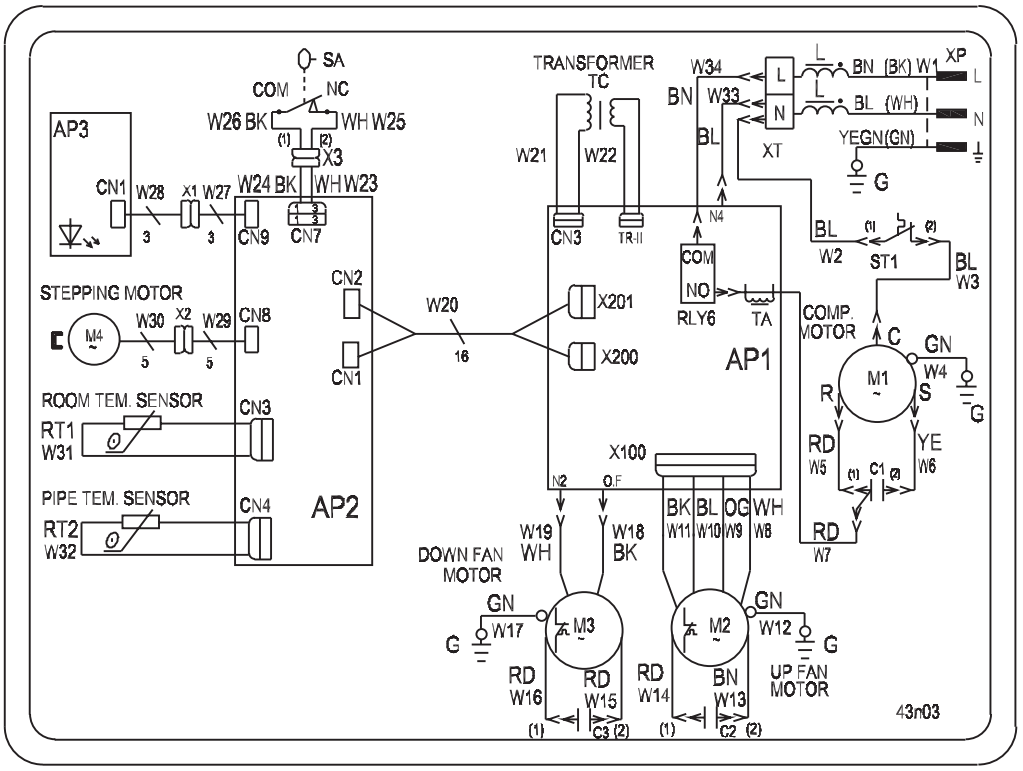


figure 2-4

GP12-12R KYD-32/K101

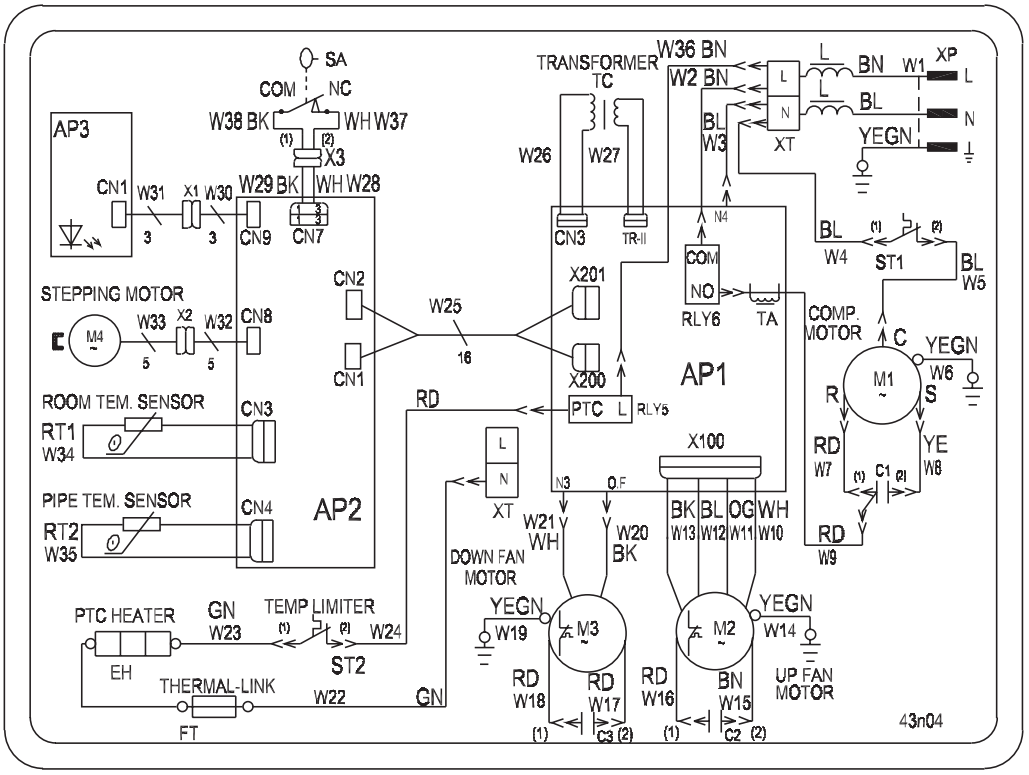


figure 2-5

2.8 PCB function manual

The 4 In 1 PCB function manual of the Mobile

1. **Adequate models:**
   Mobile split Air-conditioner about 7,000Btu;
   Mobile Air-conditioner about 7,000Btu;
   Mobile split Air-conditioner about 9,000Btu;
   Mobile Air-conditioner about 9,000Btu.
2. **Running mode:**
   1) FAN; 2) COOL; 3) DRY; 4) HEAT; 5) AUTO.
3. **Controlling modes:**
   1) Control panel; 2) Remote control.
4. **The parameter to be input:**
   1) Analog quantity:
      ① the ambient temperature of the indoor unit (shorten form is T_{in})
      ② the temperature of deforesting (shorten form is T_{de})
      ③ the evaporator temperature of the indoor unit (shorten form is T_{eva})
      ④ the current of the compressor (shorten form is I_{co})
   2) Switch quantity:
      the switch of the higher water level
      the switch of the lower water level
   3) Controlled Input:
      by the controlling panel;
      by the remote control.
5. **The parameter to be output:**
   1) Output quantity of transformer:
      Indoor fan motor(3-speed)
      Outdoor fan motor
      Compressor
      Reversing valve
      Indoor & outdoor water pump
      Sweeping fan motor
      Electrical heater
   2) Output quantity of LED:
      the light of the running compressor (LED1 green)
      The light of the beeper (LED2 red)
   3) Others:
      LCD

Beeper

6. The basal control modes:

1) Cooling mode:

If $T_{in} \geqslant T_{set}$, cooling mode act, compressor and outdoor unit run, and indoor unit run in the set speed;

If $T_{in} \leqslant T_{set}$-1℃, the unit will be stop from cooling mode, compressor and outdoor unit stop, and indoor unit still run in the set speed;

If T_{set}-1℃$< T_{in} < T_{set}$, keep running in the old mode;

In the cooling mode, the range of T_{set} is 16℃~30℃, the initialize is 25℃

LCD: 9,000Btu series display “cooling”, ” the set fan speed”, “T_{set}”

12,000Btu series display dynamic “the falling snow”, “the fan revolving in the set speed”, ”the set fan speed”, and “T_{set}”

The protecting functions:

①Avoiding freezing:

Once the compressor works for 10min, when $T_{eva} \leqslant$-6℃ for over 8sec, the compressor and the outdoor unit fan motor stop, the indoor unit fan motor run in the set speed. After the compressor stops for 3min and $T_{eva} \geqslant$8℃, everything runs in the old speed.)

②Water pump control and the protection for the full water:

The indoor unit water pump will work when the lower water switch is close till the lower water switch open for 2min.

The outdoor unit water pump will work after the indoor unit water pump works for 1min at the 1st time, the outdoor unit water pump will stop when the compressor stop and it will linkage with compressor in future.

When the higher water switch is close, the buzzer will alarm “click, click” 8 times, LCD display the wrong code “E4” in the location of “setting temperature” (for the 9,000Btu series, LED2 flash), it means the indoor unit water pump does not work and the unit stop till the protection is canceled.

There is no water pump in the mobile air-conditioner, 1K resistance is used to short the lower water pump. The higher water pump is close when the water tank is full, the buzzer alarm “click, click” 8 times LCD display the wrong code “E4” in the location of “setting temperature” (for the 9,000Btu series, LED2 flash), it means the indoor unit water pump does not work and the unit stop till the protection is canceled.

The indoor unit and outdoor unit water pumps do not work in the mode of fanning and heating.

③Protecting the compressor:

The distance between 2 times running won’t less than 3min once the compressor work and it will not stop by the changing of the temperature in the next 6min.

The compressor and the outdoor unit fan motor will stop when it is change from heating mode to cooling mode.

④The protection of overload current (low voltage protection):

When the $I_{co} \geqslant 13A$ for 3sec, the unit fan only (for 9,000Btu series, LED2 flash), LCD display the wrong code E1, it means the I_{co} is exceed the set current, compressor stop till the fault is canceled in 3min.

2) Drying mode:

The indoor unit fan motor runs in the low speed, compressor and outdoor unit fan motor run continually, the T_{set} will not be displayed and changed.

For 9,000Btu series, it will be displayed the "drying" sign and "low speed", for 12,000Btu series, it will be displayed the picture of "water dripping" dynamic, the fan runs slowly.

The protection functions are same as the cooling mode, for 12,000Btu series, it will be displayed the picture of "water is overflow" dynamic when the water tank is full.

3) Heating mode:

● **Mobile split air-conditioner (cooling & heating)**

① If $T_{in} \leqslant T_{set}+3℃$, heating mode act, reversing, compressor and outdoor unit fan motor run, indoor unit fan motor runs in the set speed and the condition of avoiding the cold wind;

② If $T_{in}=T_{set}+4℃$, keep running in the old mode;

③ If $T_{in} \geqslant T_{set}+5℃$, compressor and outdoor unit fan motor stop, reserving valve is still electric ,the indoor unit fan motor runs in the set speed and flow the rest heat;

In the heating mode, the 4-way valve will be electroless in 2min after the unit is turned off.

④ LCD: 9,000Btu series display the sign of heating, indoor unit fan motor speed and T_{set}. 12,000Btu series display the sun light radiate outside dynamic, the fan runs in the set speed and T_{set}.

⑤ Electrical heater:

When the indoor unit fan motor run in middle or high speed, $T_{eva} \leqslant 49℃$, $T_{in} \leqslant 23℃$, and $T_{in} \leqslant T_{set}+1℃$, electrical heater work.

When indoor unit fan motor stop or run in low speed, either $T_{eva} \geqslant 57℃$, or $T_{in} \geqslant 26℃$,or $T_{in} \geqslant T_{set}+4℃$, electrical heater stop and restart till 2min later.

⑥ The protecting functions:

a. Protecting too high temperature of the compressor:

In heating mode, when $T_{eva} \geqslant 66℃$ for 8sec, the outdoor unit fan motor stop, LCD display "E3" in the location of T_{set}; when $T_{eva} \leqslant 56℃$, outdoor unit fan resume to run, the indoor unit fan motor run in the set speed and LCD resume too.

b. The conditions of avoiding cold wind:

In heating mode, either $T_{eva} \geqslant 28℃$ or the compressor running for over 10sec, the indoor unit fan motor run in the set speed.

c. The conditions of flowing hot wind:

Once the compressor stop, the indoor unit fan motor runs in low speed and will stop too in 30sec.

d. The conditions of beginning defrosting:

After the unit continue heating for 45min and if $T_{de} \leqslant -8℃$, the defrosting mode act, the reversal valve, the indoor and outdoor unit stop but the compressor.

If there is electrical heater in the unit, then it will be stop first and the reversal valve, the indoor and outdoor unit stop in 1min.

e. The conditions of stopping defrosting:

After the unit continue defrosting for 10min or if $T_{de} \geqslant 10℃$, the defrosting stop, the reversal valve, the outdoor unit run, and the indoor unit fan motor will run in the condition of avoiding the cold wind.

f. The protection of overload current is same as cooling mode

g. The delay of compressor

The distance between 2 times running won't less than 3min once the compressor work and it will not stop by the changing of the temperature in the next 6min.

The compressor and the outdoor unit fan motor will stop for 3min when it is change from heating mode to cooling mode. The indoor unit fan motor run in the set speed the mode and avoiding the cold win and.

● **12,000Btu series mobile air-conditioner whit the mode cooling & heating**

① If $T_{in} \leqslant T_{set}+3℃$, heating mode act, reversing, compressor, outdoor unit fan motor and electrical heater run, indoor unit fan motor runs in the set speed ;

② If $T_{in}=T_{set}+4℃$, keep running in the old mode;

③ If $T_{in} \geqslant T_{set}+5℃$, electrical heater stop and the indoor unit fan motor will stop in 15sec.

4) Fanning mode:

The indoor unit fan motor has 3 speeds which are high, middle and low, it will bot display the T_{set} and can not be changed.

9,000Btu series display the high, middle and low speed sign by the speed of indoor unit fan motor;

12,000Btu series display the fanning sign same as the indoor unit fan.

5) Auto functions:

The unit run depending on the T_{in}.

① If $T_{in} > 26℃$, cooling mode act, T_{in} is 26℃.

② If $26℃ \geqslant T_{in} \geqslant 20℃$, drying mode act, indoor unit fan motor run in low speed, compressor and outdoor unit fan motor run continually.

③ If $T_{in} < 20℃$, the different unit run different mode.

a. Air-conditioner with cooling & heating mode run heating mode, T_{set} is 20℃, if $T_{in} \geqslant$ 24℃, stop heating.

Electrical heating run depending the conditions following:

If $T_{in} \leqslant T_{set}$, heating mode act, reversal valve, compressor and outdoor unit fan motor run together, indoor unit fan motor run in the set speed and avoiding the cold wind.

If $T_{set} < T_{in} < T_{set}+2℃$, the unit run in old mode.

If $T_{in} \geqslant T_{set}+2℃$, compressor, outdoor unit fan motor stop together, reversal valve is

electrical, indoor unit fan motor run in the mode of flowing the hot wind.

If indoor unit fan motor run in middle or high speed, $T_{eva} \leqslant 49℃$, $T_{set} \leqslant 23℃$, and $T_{in} \leqslant T_{set}-2℃$, electrical heater act.

If either indoor unit fan motor stop or run in low speed, or $T_{eva} \geqslant 57℃$, or $T_{in} \geqslant 26℃$, or $T_{in} \geqslant T_{set}+1℃$, electrical heater stop and restart in 2min.

The protecting function of auto-heating mode is same as heating mode.

b. 12,000Btu series cooling only mobile air-conditioner and mobile split air-conditioner run the fanning mode, if $T_{in} \geqslant 24℃$, stop fanning.

c. 12,000Btu series cooling & heating mobile air-conditioner run the heating mode same as the heating mode, T_{set} is 20℃, if $T_{in} \geqslant 24℃$, heating mode stop.

④ LCD: It display the corresponding code of the running mode and the “AUTO” mark.

7. Other control:

1) Timer:

Set timer to “OFF” when the unit is working and set time to “ON” when the unit is stop, the range is 2~4h, the set time will decrease 0.5h once pressing the button “ ∨ ”, and it will increase 0.5h once pressing the button “∧”. The buttons have the function of canceling “set timer”.

2) Sleep:

If it is cooling or drying, in 1hour of the beginning, the T_{set} will be increased 1℃, and it will be increased more 1℃ in the later 2hour, then the unit runs in this temperature.

If it is heating, in 1hour of the beginning, the T_{set} will be decreased 1℃, and it will be decreased more 1℃ in the later 2hour, then the unit runs in this temperature.

LCD display the “SLEEP” mark and for 12,000Btu series, it display the twinkle stars.

3) Choosing the models:

Models are decided by the state of the chi’ feet.

21 foot is 12,000Btu(upwards)/9,000Btu(downwards)

22 foot is Celsius(upwards)/Fahrenheit(downwards)

20 foot is Cooling &heating(upwards)/cooling only(downwards)

19 foot is Mobile split(upwards)/Mobile(downwards)

4) LED of 12,000Btu series:

① The light of compressor running is green and it is light when the compressor is working;

② The light of protecting is red. It will twinkle when the water tank is full or there is a overload in compressor, the frequency of twinkling is 1Hz.

5) Controlling the sweep motor:

9,000Btu series’ sweep motor is controlled by the button-sweeping, when the button is pressed once, sweep motor run and will stop when it is pressed again.

12,000Btu series’ sweeping motor revolve 85° anticlockwise to open the air let at the beginning of the unit running and it revolve clockwise to close the air let when the unit is stop.

6) Testing functions:

Turn on the unit when the FAST is short circuit, LCD is light for 3sec, press the “mode” button, there is no delay protection for compressor and others functions are all same as the normal state.

Turn on the unit when the FAST is shorten, if the sensor is open or short circuit, LCD display the following mark in the location of T_{set}:

Sensor of indoor unit is open or short, display “F0”

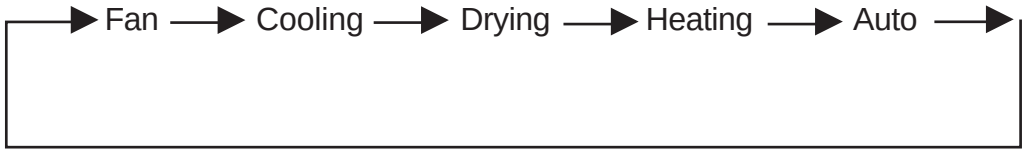
Sensor of evaporator is open or short, display “F1”

Sensor of deforesting is open or short, display “F2”

7) It can be used in the range of AC220V±10%.
8) There is a short circuit protecting in the circuit.

8. Buttons on the control panel:

1) ON/OFF button;
2) MODE button;



3) Fan speed button;

4) Timer button;

The range of changing set time is 0.5~24h, the set time will be canceled when press “∨” when set time is 0.5h or press “∧” when set time is 24h.

5) Temperature button;

The range of changing set temperature is 16℃~30℃.

6) Sleeping button:
7) Sweeping button (just for 9,000Btu series).

9. Design of remote control:

Y602(Chinese) and Y612A(English, Celsius)/Y612AF(English, Fahrenheit) are be used to control 12,000Btu series of mobile, mobile and split air-conditioner.

TECHNICAL SERVICE MANUAL

—— Mobile Air-conditioner Series

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI
Jinji West Rd. Qianshan Zhuhai
Guangdong China

Introduction

In this technical service manual, you will find rich references to Mobile Air-conditioner Series products, including photos, technical specifications, explosive views, spare parts lists and circuit diagrams. Service people and engineers of Gree's customers and distributors would find it a very handy source of technical information of our products.

Technical Support Department
GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI
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