SERIE
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CATALOGUE
FMMT 01

SUPERSEDES

En

INSTALLATION, OPERATION AND SERVICE MANUAL

EUROFRED

WALL TYPE FAN COIL

INDEX

FME SERIE
WALL TYPE FAN COIL

GENERAL DESCRIPTION

The Wall Type Fan Coil is designed to meet and exceed the demanding requirements for efficiency, quiet operation and good looks. The sleek profile and elegantly styled cabinet will complement any interior design theme. The Microprocessor assures accurate environmental control.

Cabinet

The cosmetically attractive cabinet is constructed of durable flame resistant acrylonitrile-butadiene-styrene. The color and rounded corners provide its contemporary appearance.

Water coil

The water coil has a large heat transfer surface utilizing the latest technology in fin profile. This is combined with security in tube thickness of traditional design. The water coil is also equipped with air vent valve and water purge valve.

Integral hoses

Synthetic elastomer tube with stainless steel outer braiding and brass connectors makes for quick and low cost connections with no brazing.

Blower and motor

Incorporating only specially designed and tested high power-factor permanent split capacitor type blower motors, the tangential blower wheel provides the optimum in airflow-efficiency and QUIET operation.

Filters

Standard to all models are washable fine mesh air filters. Tabs located on the front of the unit can be unsnapped and the filter easily slide downward for removal. No tools are required, nor are dismantling of the equipment.

Air grille distribution

Equipped with both deflector blades and independent directional vanes, supply air can automatically be distributed and customized to direct the air where desired.

Microprocessor control

See Control Section for complete details. Main features:

- Computer management system control
- Master-Slave control
- Cool, Heat, Fan, Dehumidify, Auto modes
- Sleep, AutoFan, Auto-Restart with Memory functions
- Timer function to start or stop the unit up to 24 hours
- Remote Control Handset
- Heat and Cool Temperature Safety Cut Out
- Status Indication to boiler and chiller
- 3 way valve control
- Wired Wall Pad Control with 24 hours timer
- Manual Control Panel in Cabinet

SPECIFICATIONS

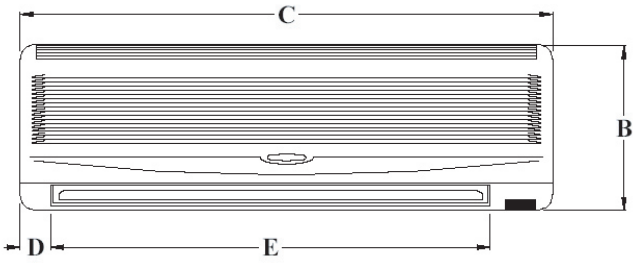
Model			FME-04	FME-06	FME-09	FME-12	FME-15	FME-18
Air flow (H/M/L)		M^3/min	7.8/5.1/3.9	8.5/5.7/4.5	11.7/7.9/5.4	12.8/9.3/5.7	14.2/9.9/5.7	15/10.5/6.2
Nominal Cooling Capacity*		Btu/hr	4,090	6,140	9,210	12,280	15,010	18,080
		Kw	1.2	1.8	2.7	3.6	4.4	5.3
Nominal Sensible Cooling Capacity		Btu/hr	3,070	4,100	6,820	9,550	10,920	12,280
		Kw	0.9	1.2	2	2.8	3.2	3.6
Nominal Heating Capacity**		Btu/hr	4,430	7,170	10,240	13,650	17,060	20,470
		Kw	1.3	2.1	3	4	5	6
Nominal Heating Capacity***		Btu/hr	7,170	10,920	15,350	20,470	25,590	30,710
		Kw	2.1	3.2	4.5	6	7.5	9
Noise Level @ 1 M (L/M/H)		dB(A)	32/34/35	32/34/36	32/35/38	33/35/39	35/37/41	40/42/45
Coil	Type		Aluminum Louver Fin : Plain Tube					
	Internal Vol.	Litre	0.43	0.43	0.97	0.97	1.1	1.7
Thermostat	Type		Wireless I.C. Remote Control					
Fan	Type		Cross -Flow Fan					
Fan Motor	Power Supply (V/Ph/Hz)		230/1/50					
	Output	Watt	18	18	30	30	35	35
	Rated Load	Ampere	0.13	0.13	0.24	0.24	0.35	0.35
Connection plain end copper tube	Water In	OD (In.)	1/2	1/2	1/2	1/2	3/4	3/4
	Water Out	OD (In.)	1/2	1/2	1/2	1/2	3/4	3/4
	Drain	OD (In.)	1/2	1/2	1/2	1/2	3/4	3/4
Valve (3 way 4 port) Dia		OD (In.)	1/2	1/2	1/2	1/2	3/4	3/4
Water flow rate		GPM	0.7	1.24	1.8	1.8	3.1	3.6
		L/min	2.67	4.67	6.83	9.45	11.72	13.62
Pressure drop	Cooling	Ft of WG	1.95	5.24	3.49	5.54	7.13	8.44
		KPa	5.85	15.72	10.48	16.62	21.38	25.31
	Heating	Ft of WG	1.46	3.93	2.62	4.16	5.35	6.33
		KPa	4.37	11.78	7.86	12.47	16.04	18.98
Dimension	Height	mm	270	270	320	320	330	330
	Widht	mm	870	870	1,030	1,030	1,160	1,160
	Depth	mm	176	176	196	196	198	198
Net weight		Kg	11.5	11.5	13.5	13.5	16.5	16.5

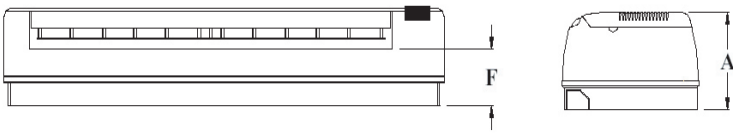
*Cooling: 27ºC db/19°C wb entering air temperature,7°C entering water and 12°C leaving water temperature, with water flow rates as above.
**Heating: 20°C db entering air temperature, 70°C entering water temperature with water flow rate same as for the cooling test.
***Heating : 20°C db entering air temperature, 50°C entering water temperature with water flow rate same as for the cooling test.

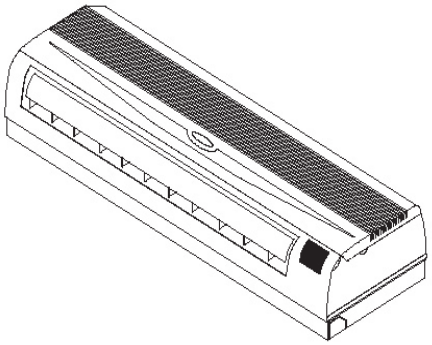
Coil data

Model	Fin Height (mm.)	Fin Length (mm.)	Fins per Inch	No. of Rows	No. of Circuits	Tube F
FME-04	209.8	495	15	2	3	7 mm.
FME-06	209.8	495	15	2	3	7 mm.
FME-09	228.6	610	15	2	3	3/8”
FME-12	228.6	610	15	2	3	3/8”
FME-15	228.6	690	15	3	4	3/8”
FME-18	228.6	690	15	3	4	3/8”

DIMENSIONAL DRAWINGS







	FME 04	FME 06	FME 09	FME 12	FME 15	FME 18
A	176	176	196	196	198	198
B	270	270	320	320	330	330
C	870	870	1030	1030	1160	1160
D	58	58	50	50	58	58
E	696	696	813	813	916	916
F	87	87	100	100	110	110

(All shown in mm.)

PERFOMANCE TABLES

Cooling capacity tables

2 Pipe Cooling Capacity -- Entering Air Condition DB = 22°C WB = 16°C (RH = 50%)

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)									
			5		6		7		8		9	
	l/min	Kpa	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH
FME04	2.5	5.0	1,100	850	1,100	820	930	790	850	760	750	720
	4.0	10.3	1,300	955	1,280	920	1,150	880	1,030	880	980	800
	6.0	23.5	1,550	1,050	1,540	1,050	1,340	980	1,200	950	1,100	840
FME06	4.0	10.34	1,550	1,120	1,530	1,100	1,380	1,050	1,250	980	980	910
	6.0	22.5	1,800	1,240	1,650	1,200	1,550	1,250	1,380	1,050	1,100	950
	9.0	41.88	1,980	1,350	1,950	1,280	1,850	1,280	1,550	1,120	1,280	1020
FME09	5.0	7.2	2,200	1,590	2,100	1,560	1,950	1,450	1,700	1,400	1,450	1,280
	8.0	18.2	2,780	1,780	2,450	1,700	2,250	1,590	1,900	1,480	1,580	1,350
	12.0	36.2	3,050	1,960	2,850	1,880	2,650	1,740	2,200	1,590	1,980	1,540
FME12	7.0	10.3	3,080	2,280	2,880	2,250	2,670	2,050	2,250	1,940	2,050	1,850
	10.0	21.8	3,500	2,480	3,200	2,380	2,980	2,200	2,450	2,030	2,250	1,980
	15.0	42.8	3,800	2,570	3,600	2,480	3,150	2,400	3,050	2,150	2,650	2,050
FME15	9.0	13	3,850	2,780	3,550	2,750	3,250	2,580	3,070	2,370	2,750	2,180
	13.0	22.5	4,350	2,900	4,050	2,900	3,800	2,800	3,090	2,550	2,850	2,340
	18.0	42.8	4,760	3,100	4,300	3,050	4,080	2,980	3,800	2,680	3,350	2,390
FME18	11.0	15.8	4,780	3,300	4,350	3,500	4,100	3,170	3,950	2,880	3,650	2,620
	15.0	26.9	5,100	3,550	4,750	3,790	4,400	3,260	4,100	3,050	3,850	2,730
	20.0	45.2	5,380	3,700	4,980	3,850	4,500	3,470	4,100	3,180	3,890	2,950

Capacity unit Watt
NOTE: TH - Total Cooling Capacity
SH - Sensible Cooling Capacity
Q1 - Water Flow Rate
PD - Pressure Drop

2 Pipe Cooling Capacity -- Entering Air Condition DB = 24°C WB = 17°C (RH = 50%)

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)									
			5		6		7		8		9	
	l/min	Kpa	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH
FME04	2.5	5.0	1,150	930	1,080	890	950	850	890	830	810	800
	4.0	10.3	1,480	1,080	1,280	980	1,180	950	990	880	830	810
	6.0	23.5	1,670	1,150	1,460	1,070	1,370	1,080	1,180	940	970	860
FME06	4.0	10.34	1,680	1,280	1,470	1,160	1,390	1,180	1,220	1,080	1,080	1,020
	6.0	22.5	1,850	1,390	1,780	1,260	1,580	1,250	1,350	1,150	1,100	1,030
	9.0	41.88	2,020	1,450	1,840	1,380	1,750	1,280	1,480	1,230	1,230	1,070
FME09	5.0	7.2	2,400	1,720	2,080	1,670	1,850	1,580	1,680	1,490	1,500	1,450
	8.0	18.2	2,600	1,950	2,420	1,820	2,260	1,750	1,940	1,590	1,600	1,450
	12.0	36.2	3,080	2,080	2,850	1,980	2,580	1,830	2,230	1,700	1,850	1,550
FME12	7.0	10.3	3,190	2,410	2,880	2,310	2,650	2,190	2,350	2,150	2,100	2,000
	10.0	21.8	3,280	2,580	3,280	2,450	2,980	2,360	3,540	2,250	2,150	2,050
	15.0	42.8	3,880	2,790	3,620	2,680	3,260	2,460	2,820	2,350	2,360	2,100
FME15	9.0	13	3,800	2,980	3,750	2,840	3,190	2,780	2,880	2,600	2,570	2,500
	13.0	22.5	4,350	3,250	4,050	3,150	3,620	2,880	3,180	2,690	2,630	2,500
	18.0	42.8	4,850	3,360	4,380	3,200	3,980	3,040	3,290	2,800	2,590	2,590
FME18	11.0	15.8	4,840	3,560	4,450	3,450	4,050	3,320	3,480	3,070	2,970	2,880
	15.0	26.9	5,280	3,780	4,650	3,680	4,380	3,430	3,820	3,190	3,180	2,980
	20.0	45.2	5,380	3,950	5,150	3,850	4,750	3,650	4,080	3,300	3,380	3,050

Capacity unit Watt
NOTE: TH - Total Cooling Capacity
SH - Sensible Cooling Capacity
Q1 - Water Flow Rate
PD - Pressure Drop

ling Capacity -- Entering Air Condition DB = 27°C WB = 19°C (RH = 50%)

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)									
			5		6		7		8		9	
	l/min	Kpa	TH	SH	TH	SH	TH	SH	TH	SH	TH	SH
FME04	2.5	5.0	1,355	980	1,240	940	1,180	910	1,030	870	920	830
	4.0	10.3	1,620	1,090	1,520	1,030	1,420	990	1,250	950	1,110	890
	6.0	23.5	1,900	1,170	1,790	1,130	1,620	1,080	1,460	1,020	1,290	960
FME06	4.0	10.34	1,850	1,280	1,780	1,250	1,630	1,200	1,450	1,140	1,270	1,070
	6.0	22.5	2,140	1,400	2,000	1,330	1,850	1,280	1,650	1,200	1,460	1,140
	9.0	41.88	2,380	1,490	2,240	1,400	2,080	1,390	1,830	1,270	1,620	1,200
FME09	5.0	7.2	2,620	1,780	2,450	1,720	2,260	1,680	2,050	1,570	1,790	1,480
	8.0	18.2	3,140	1,980	2,980	1,900	2,780	1,850	2,420	1,700	2,140	1,610
	12.0	36.2	3,620	2,180	3,450	2,080	3,180	1,990	2,810	1,860	2,470	1,740
FME12	7.0	10.3	3,670	2,530	3,480	2,480	3,190	2,410	2,850	2,230	2,510	2,008
	10.0	21.8	4,160	2,740	3,880	2,660	3,620	2,580	3,250	2,370	2,850	2,250
	15.0	42.8	4,600	2,920	4,250	2,780	4,000	2,650	3,560	2,490	3,150	2,330
FME15	9.0	13	4,500	3,180	4,240	3,010	3,980	2,900	3,490	2,760	3,080	2,610
	13.0	22.5	5,130	3,360	4,810	3,230	4,500	3,110	3,960	2,930	3,500	2,770
	18.0	42.8	5,600	3,580	5,220	3,410	4,880	3,280	4,330	3,070	3,830	2,880
FME18	11.0	15.8	5,600	3,800	5,250	3,680	4,870	3,520	4,340	3,330	3,830	3,180
	15.0	26.9	6,180	4,080	5,740	3,860	5,290	3,700	4,740	3,470	4,190	3,280
	20.0	45.2	6,590	4,200	6,180	4,010	5,680	3,840	5,090	3,610	4,500	3,380

Capacity unit Watt

NOTE: TH - Total Cooling Capacity
SH - Sensible Cooling Capacity
Q1 - Water Flow Rate
PD - Pressure Drop

Heating capacity tables

2 Pipe Heating Capacity -- Entering Air Condition DB = 16°C (RH = 50%)

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)								
	l/min	Kpa	40	45	50	55	60	65	70	75	80
FME04	2.5	3.72	1,230	1,420	1,590	1,750	1,970	2,190	2,400	2,650	2,870
	4.0	8.5	1,470	1,700	1,890	2,090	2,350	2,600	2,870	3,160	3,420
	6.0	18.6	1,520	1,760	1,960	2,160	2,440	2,700	2,980	3,290	3,540
FME06	4.0	8.8	1,700	1,970	2,200	2,430	2,730	3,040	3,350	3,710	3,980
	6.0	17.5	1,830	2,100	2,350	2,600	2,920	3,250	3,580	3,930	4,260
	9.0	31.5	2,020	2,330	2,600	2,860	3,240	3,590	3,940	4,340	4,700
FME09	5.0	5.6	2,400	2,800	3,100	3,420	3,860	4,290	4,700	5,180	5,620
	8.0	14.3	2,600	3,020	3,370	3,710	4,180	4,650	5,100	5,630	6,100
	12.0	26.4	2,800	3,240	3,600	3,980	4,490	4,970	5,470	6,020	6,530
FME12	7.0	8.4	3,370	3,910	4,350	4,790	5,400	6,000	6,590	7,270	7,860
	10.0	16.5	3,550	4,080	4,530	5,000	5,620	6,250	6,870	7,560	8,200
	15.0	32.6	3,750	4,340	4,830	5,340	6,000	6,660	7,320	8,070	8,740
FME15	9.0	10	4,100	4,840	5,280	5,820	6,560	7,280	8,010	8,830	9,600
	13.0	18	4,400	5,030	5,610	6,200	7,000	7,740	8,500	9,380	10,200
	18.0	32.3	4,500	5,210	5,810	6,450	7,280	8,010	8,820	9,710	10,500
FME18	11.0	11.4	5,100	5,870	6,560	7,240	8,200	9,040	9,980	10,960	11,900
	15.0	20.4	5,300	6,120	6,830	7,530	8,500	9,430	10,350	11,410	12,400
	20.0	33.7	5,430	6,270	7,000	7,740	8,700	9,650	10,600	11,700	12,700

Capacity unit Watt

NOTE: TH - Total Cooling Capacity
SH - Sensible Cooling Capacity
Q1 - Water Flow Rate
PD - Pressure Drop

2 Pipe Heating Capacity -- Entering Air Condition DB = 20°C (RH = 50%)

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)								
	l/min	Kpa	40	45	50	55	60	65	70	75	80
FME04	2.5	3.72	1,120	1,280	1,420	1,470	1,700	1,910	2,130	2,350	2,570
	4.0	8.50	1,340	1,530	1,700	1,760	2,020	2,280	2,540	2,800	3,060
	6.0	18.6	1,390	1,590	1,760	1,820	2,090	2,370	2,630	2,900	3,180
FME06	4.0	8.8	1,550	1,780	1,970	2,040	2,350	2,650	2,960	3,260	3,560
	6.0	17.5	1,660	1,900	2,100	2,190	2,520	2,840	3,170	3,490	3,820
	9.0	31.5	1,840	2,100	2,320	2,420	2,780	3,140	3,500	3,850	4,210
FME09	5.0	5.6	2,200	2,510	2,780	2,890	3,320	3,740	4,180	4,600	5,030
	8.0	14.3	2,380	2,730	3,020	3,140	3,600	4,060	4,530	4,990	5,500
	12.0	26.4	2,550	2,920	3,230	3,360	3,860	4,350	4,850	5,350	5,840
FME12	7.0	8.4	3,070	3,520	3,900	4,050	4,650	5,250	5,850	6,450	7,040
	10.0	16.5	3,200	3,670	4,050	4,230	4,840	5,480	6,090	6,710	7,340
	15.0	32.6	3,400	3,920	4,330	4,500	5,160	5,870	6,500	7,170	7,840
FME15	9.0	10	3,730	4,280	4,750	4,920	5,650	6,370	7,100	7,880	8,580
	13.0	18	3,970	4,550	5,030	5,230	6,000	6,770	7,550	8,380	9,090
	18.0	32.3	4,100	4,700	5,200	5,400	6,210	7,010	7,810	8,620	9,420
FME18	11.0	11.4	4,630	5,320	5,880	6,100	7,010	7,920	8,820	9,780	10,600
	15.0	20.4	4,830	5,530	6,120	6,360	7,300	8,240	9,180	10,200	11,100
	20.0	33.7	4,950	5,670	6,280	6,520	7,480	8,450	9,410	10,400	11,340

Capacity unit Watt

NOTE: TH - Total Cooling Capacity
SH - Sensible Cooling Capacity
Q1 - Water Flow Rate
PD - Pressure Drop

Pipe Heating Capacity -- Entering Air Condition DB = 22°C (RH = 50%)

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)								
	l/min	Kpa	40	45	50	55	60	65	70	75	80
FME04	2.5	3.72	1,010	1,180	1,320	1,480	1,690	1,910	2,130	2,350	2,560
	4.0	8.50	1,200	1,400	1,570	1,760	2,020	2,280	2,540	2,800	3,060
	6.0	18.6	1,250	1,460	1,620	1,840	2,090	2,360	2,640	2,900	3,180
FME06	4.0	8.8	1,400	1,630	1,820	2,050	2,350	2,650	2,960	3,260	3,560
	6.0	17.5	1,500	1,750	1,950	2,190	2,500	2,840	3,160	3,490	3,810
	9.0	31.5	1,680	1,930	2,150	2,420	2,780	3,140	3,500	3,850	4,200
FME09	5.0	5.6	1,980	2,300	2,570	2,880	3,320	3,750	4,180	4,600	5,020
	8.0	14.3	2,150	2,500	2,780	3,140	3,600	4,060	4,520	4,980	5,460
	12.0	26.4	2,300	2,680	2,980	3,360	3,850	4,350	4,880	5,350	5,850
FME12	7.0	8.4	2,780	3,220	3,610	4,050	4,640	5,240	5,800	6,440	7,040
	10.0	16.5	2,890	3,360	3,780	4,220	4,840	5,460	6,100	6,750	7,340
	15.0	32.6	3,080	3,580	3,990	4,500	5,160	5,830	6,500	7,180	7,830
FME15	9.0	10	3,380	3,900	4,370	4,900	5,650	6,380	7,100	7,840	8,560
	13.0	18	3,580	4,160	4,640	5,280	6,000	6,780	7,550	8,320	9,090
	18.0	32.3	3,700	4,300	4,800	5,400	6,200	7,010	7,810	8,650	9,420
FME18	11.0	11.4	4,180	4,860	5,420	6,100	7,000	7,910	8,820	9,720	10,630
	15.0	20.4	4,350	5,060	5,650	6,350	7,300	8,240	9,180	10,120	11,060
	20.0	33.7	4,460	5,200	5,790	6,510	7,480	8,460	9,410	10,400	11,340

Capacity unit Watt

NOTE: TH - Total Cooling Capacity
SH - Sensible Cooling Capacity
Q1 - Water Flow Rate
PD - Pressure Drop

Note: Design and specification are subject to change without prior notice for product improvement.

SAMPLE SIZING PERFORMANCE CALCULATIONS

Locating information in the tables

The sample below shows where information can be found on the capacity tables. All capacities and leaving air temperatures are found at the crossing point of entering air and water values.

(A) Model FME15
(B) High speed fan
(C) Entering air @ 27°C DB / 50% R.H.
(D) Entering water temperature @ 7°C
(E) Flow rate @ 13.0 l/min

Cooling capacity table

(A) FME15
(B) High Speed Fan
(C) Extracted from the table on page 5

MODEL	Q1	PD	ENTERING WATER TEMPERATURE (°C)	
			7	
	L/min	Kpa	TH	SH
FME15	9.0	13	3,980	2,900
	13.0	22,5	4,500	3,110
	18.0	42.8	4,880	3,280

Q1 = Water Flow Rate
PD = Pressure Drop
TH = Total Cooling Capacity
SH = Sensible Cooling Capacity

Unit selection

The information in the capacity tables is based upon the system using ordinary water and being located at or near sea level. System utilizing glycol solutions and/or at high elevations degrade capacities and require correction to use of the tables. Correction factors can be found on page 10.
To select a new place of equipment the following is required.

Required Information	Example (see following page)	Correction Factors		
		TH	SH	PD
Total cooling load	3800 W			
Sensible load	2870 W			
Entering air temperatures (DB / RH)	27°C / 50%			
Entering water temperature	7°C			
Type and % of glycol used	10% Propylene	1.058	1.030	1.088
Elevation	600 m	1.020	1.075	N/A

By applying the correction factors as multipliers to the Cooling/Heating load, the loads can be adjusted to reveal the equivalent 100% water/sea level capacity. These adjusted capacities are used with the tables to determine unit size, entering water temperature (if not fixed) and the required flow rate.
With the previous example information given, the calculation would look as follows:

3800 Watts X 1.058 X 1.020 = 4101 Watts

Total cooling load
Glycol correction factor
Elevation correction factor
Corrected TH for table use

2870 Watts X 1.030 X 1.075 = 3178 Watts

Sensible cooling load
Glycol correction factor
Elevation correction factor
Corrected SH for table use

Under the 27/50 entering air column on the sample table, locate the capacities within the 7°C entering water rows that meet or exceed the corrected capacities. By following the row to the left, we find a flow rate of 13.0 l/min under the Q1 heading. This is the required flow rate.

With the flow rate now specified at 13.0 L/min, we can find the pressure drop through the coil to assist in pump sizing. The pressure drop can be found on the same table. The model FME-15 with 13.0 L/min shows us a pressure drop of 22.5 KPa. This is adjusted for the propylene glycol solution by using the correction factor as a multiplier. The formula would look as follows:

22.5 KPa x 1.088 = 24.48 KPa (actual PD with 10% propylene)

Unit performance

By applying the correction factors as divisors to the capacities in the tables, the performance of existing equipment can be determined.
Entering air and water conditions along with elevation and percentage/type of glycol solution is still required. The basic formula for total and sensible capacity usage appears below.

4500 Watts(from tables)/(1.058x1.020)(correction factors) = 4170 Watts(actual capacity of unit)

Additional notes

The tables are arranged in some of the more common DB / RH combinations found in specifications. Interpolation between columns is allowed.
The sensible capacities and leaving dry bulb temperatures are based upon the entering dry bulb. Total capacities and leaving wet bulb temperatures are based upon entering wet bulb. It is acceptable to mix entering DB / RH columns as long as entering values are constant.

Altitude correction

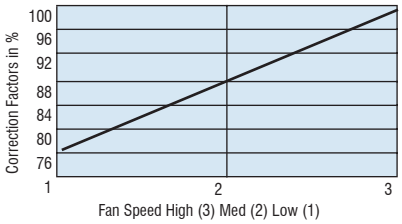
Elevation	TH	SH
300 m	1.010	1.042
600 m	1.020	1.075
900 m	1.031	1.111
1200 m	1.042	1.163
1500 m	1.064	1.205
1800 m	1.087	1.250

Correction factors for glycol solutions

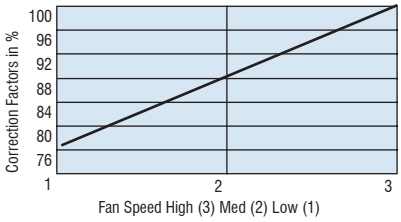
% Volume	Ethylene			Propylene		
	TH	SH	PD	TH	SH	PD
10	1.042	1.022	1.074	1.058	1.030	1.088
20	1.095	1.050	1.132	1.140	1.072	1.176
30	1.168	1.087	1.206	1.266	1.130	1.279
40	1.267	1.133	1.279	1.330	1.160	1.382
50	1.372	1.185	1.368	1.357	1.172	1.810

AIR FLOW CORRECTION FACTORS

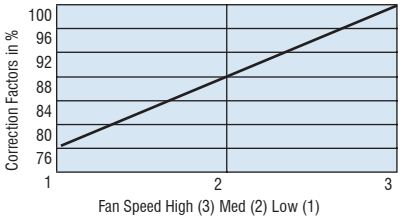
Air Flow Correction For Total Cooling Capacity



Air Flow Correction For Total Heating Capacity



Air Flow Correction For Sensible Cooling Capacity



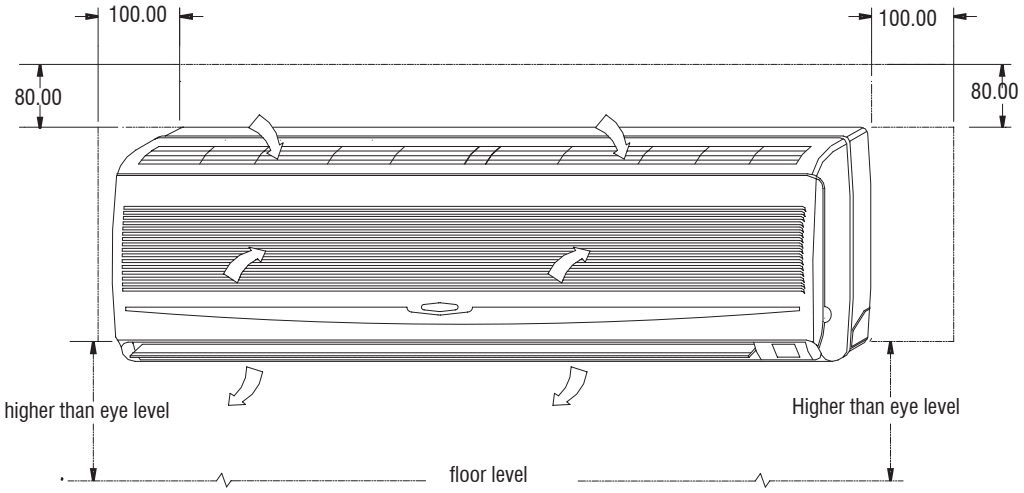
To get the required capacity for medium or low fan speed, just multiply the capacity you obtained from previous tables and calculations by the appropriate correction factor in % obtained from the above charts.

INSTALLATION OF WALL TYPE FAN COIL

LOCATION

Select the location of the Wall Type Fan Coil with the following considerations:

1. The front of the air inlet and outlet should be free from any obstructions. The air should flow freely.
2. The wall where the unit is to be mounted should be stiff enough not to resonate and produce noise.
3. The location should allow easy access to install the connecting water pipes and where drainage can be easily obtained.
4. Ensure the clearance on every side of the fan coil unit conforms to the following drawing.
5. From the floor the height should be more than eye level.
6. Avoid installing the unit in direct sunlight.

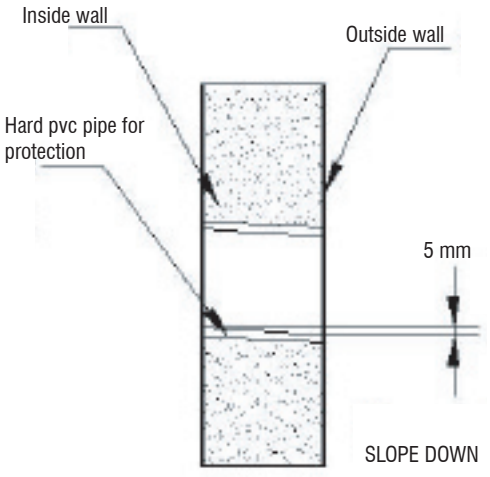


Required clearance for maintenance and servicing is shown above.
All dimensions are in millimeters.

7. The signal receiver on the unit must be kept away from any high frequency emission source.
8. Also keep the unit away from fluorescent lamps, which also may affect control system.
9. To avoid electromagnetic control system interference ensure control wires are installed separately from 220-240 VAC power wires.
10. Where electromagnetic waves exist use shielded sensor cable.
11. Install a noise filter if any harmful noise exists in the power supply.

WALL PENETRATION

1. Drill a hole in the wall as shown in diagram.
2. Hole should be drilled with a slight downward slant to the outdoor side to enable the condensed water to flow.

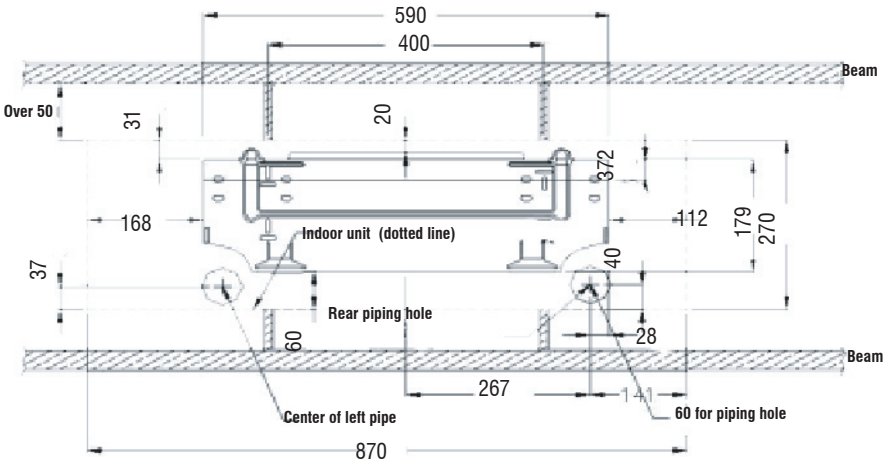


MOUNTING PLATE AND PREPARATION

FME-04-06

5 mm. lower than rear piping center if using left piping method.

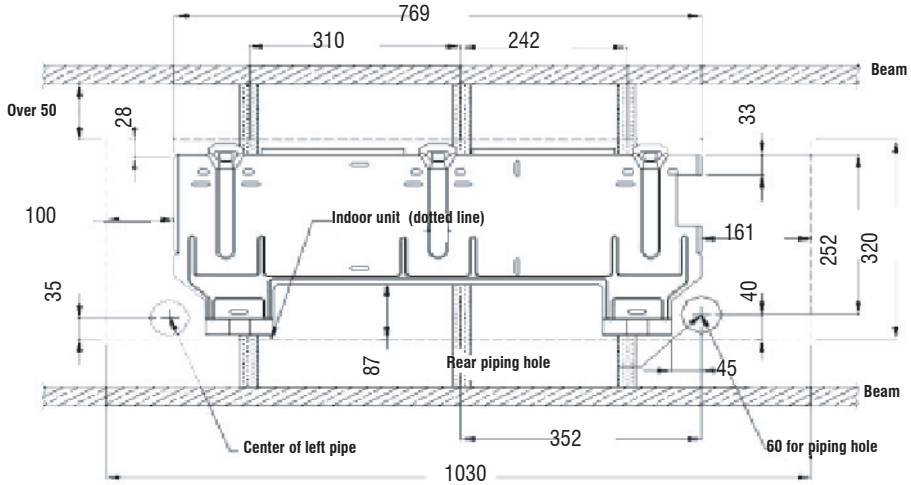
if hole drilled is ϕ 55 mm. center has to be loweed by 3mm.



FME- 09/12

5 mm. lower than rear piping center if using left piping method.

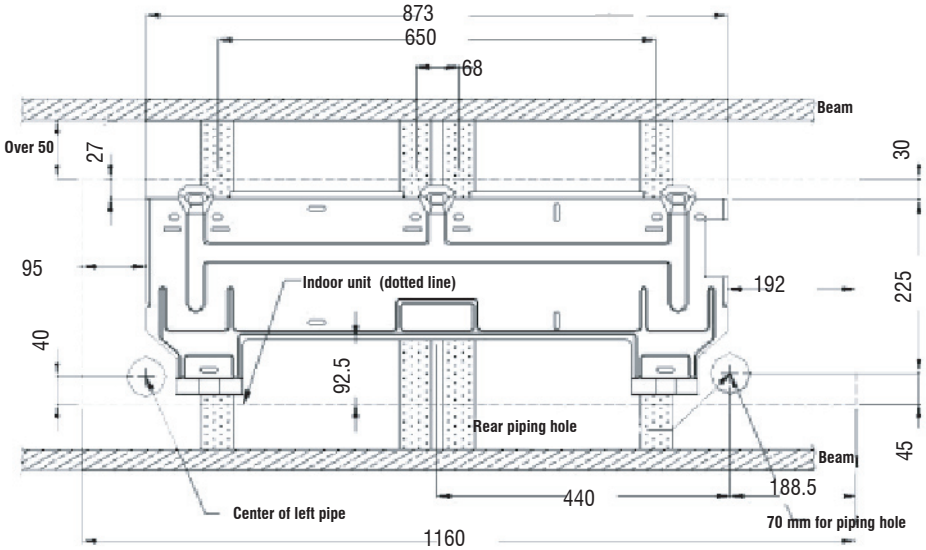
if hole drilled is ϕ 55 mm. center has to be loweed by 3mm.



FME- 15/18

5 mm. lower than rear piping center if using left piping method.

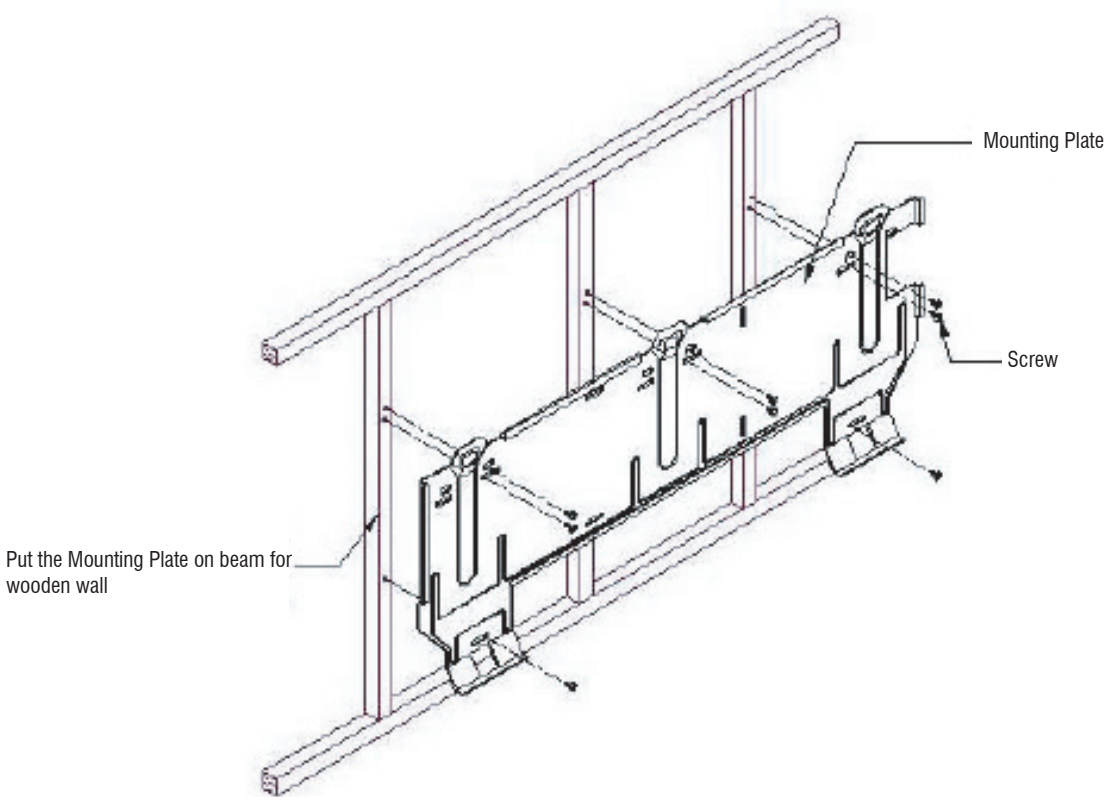
if hole drilled is ϕ 55 mm. center has to be loweed by 3mm.



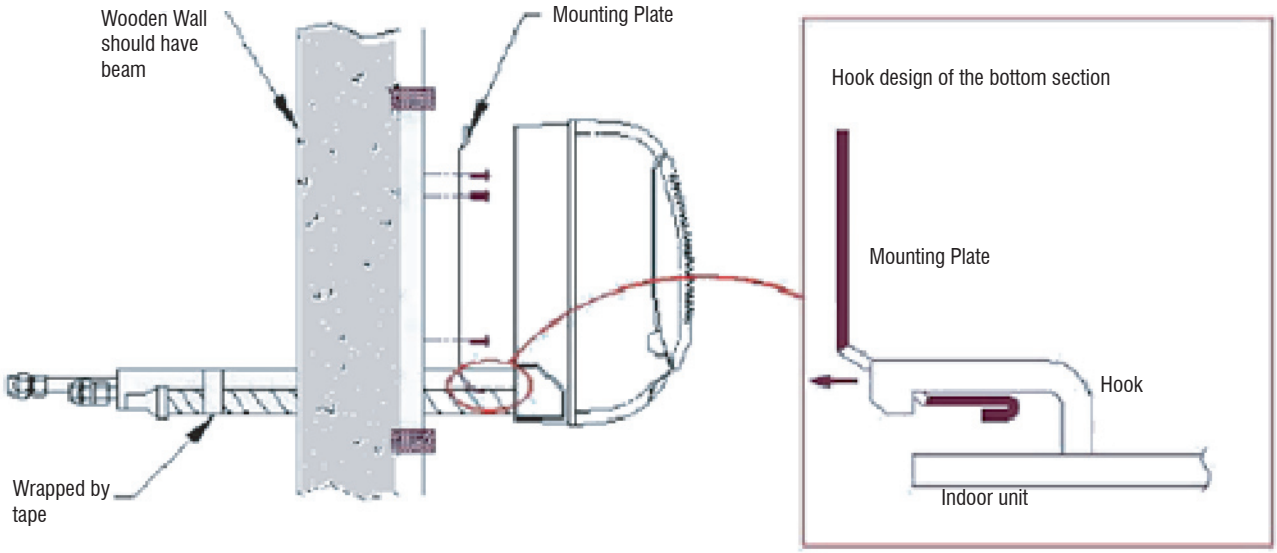
INSTALLING MOUNTING PLATE

A. Brick or Concrete Wall
   1. Place the mounting plate flush against the wall making sure it is horizontal, then trace out the holes to be drilled.
   2. Drill holes, insert screw plugs to which the mounting plate can be secured.
   3. Before fixing screws tightly make a final check to make sure plate is horizontal.

B. Wooden Wall
   1. Secure the mounting plate to the beams to prevent vibration.
   2. If there is no beam, then you can only secure the mounting plate with more screws to add strength.
   3. Use the accompanying screws to secure the plate, but make sure the plate is horizontal before securing it.
   4. After securing the plate, pull it to see whether it is strong enough to hold the unit in place.

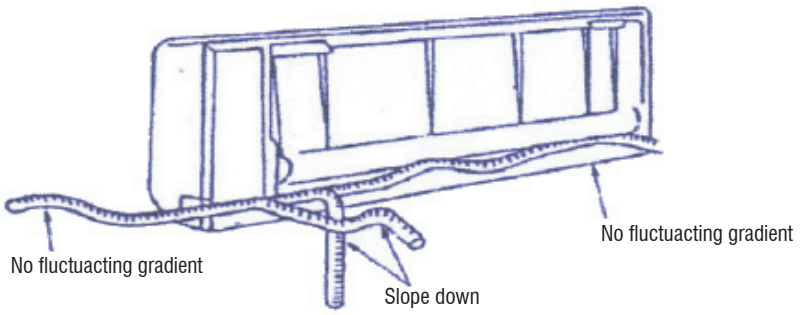


- First connect the water piping and the drain pipe to the connection at the back of the unit, then install the unit to the mounting as shown.
- After hanging the unit, press it to the mounting plate (after installing it pull it towards yourself making sure it is properly in place and secured)

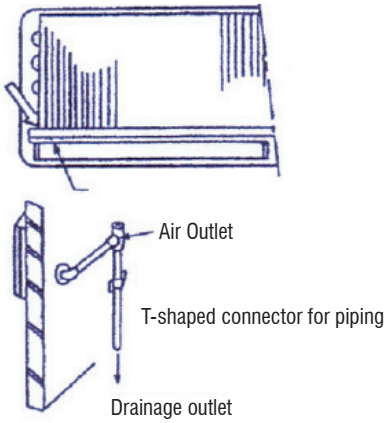


DRAINAGE

1. For the sake of drainage, design installation with gradient.
2. Drain hose as shown below, cannot have a fluctuating gradient or it will store water and damage the pipe.

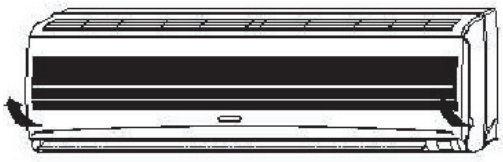


3. When drainage has been completed, it should be tested by filling the drain tray at the left corner of the fan coil unit with water to ensure drainage is clear and unobstructed.



4. After connecting the drain pipe, insulation should be applied.
5. If the horizontal drain pipe is too long an air outlet should be added, i.e. a T shaped 3-way connector (PVC material) as shown above.

OPENING & CLOSING OF LIFT UP COVER



Open the lift up cover by lifting up at positions as indicated

Close the lift up cover by pressing down at the two positions as indicated until the cover is firmly closed.

HOW TO REMOVE THE FRONT COVER ASSEMBLY

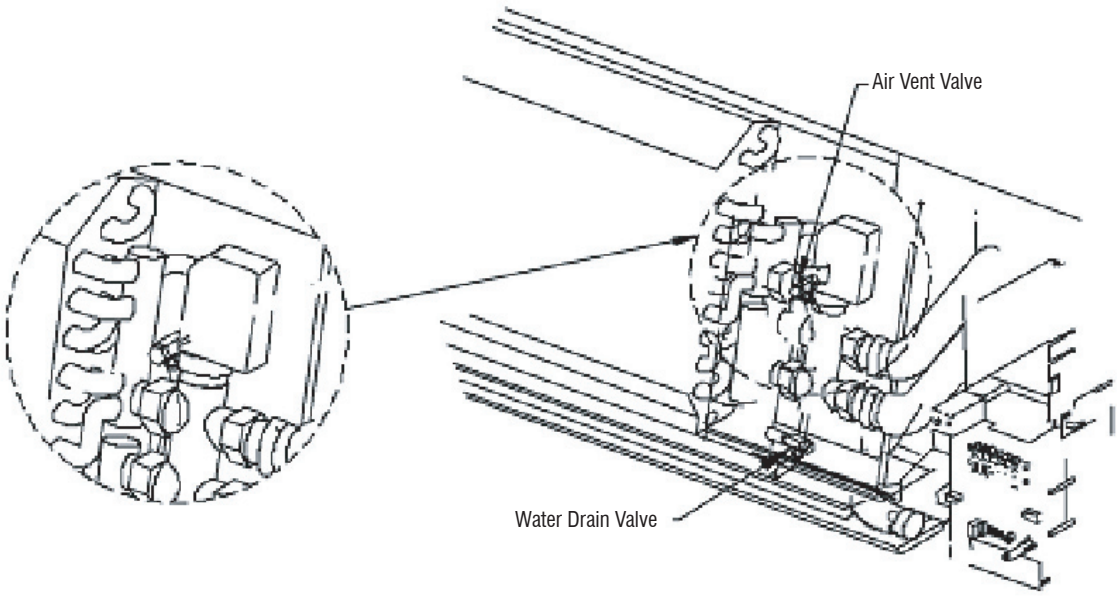
1. Set the horizontal louver to horizontal position.
2. Remove the screw caps below the louver, and then remove the mounting screws.
3. Open the lift up cover by grasping the panel at both sides.
4. Remove the remaining screws located at the centers.
5. Grasp the lower part of the front cover and pull the entire assembly out and up towards you.

AIR PURGING

1. After connecting the water inlet and outlet pipes to the main supply lines, turn on the main breaker and operate the unit in COOLING mode.
2. Open the water inlet valve and flood the coil.
3. Check all connections for water leakage, if no leak is found open the air vent valve with an open end wrench (No.10). Then purge the air trapped inside the coil. When performing this, take care not to touch the electrical parts.
4. Close the purging valve when no bubbles appear.
5. Open the water outlet valve.

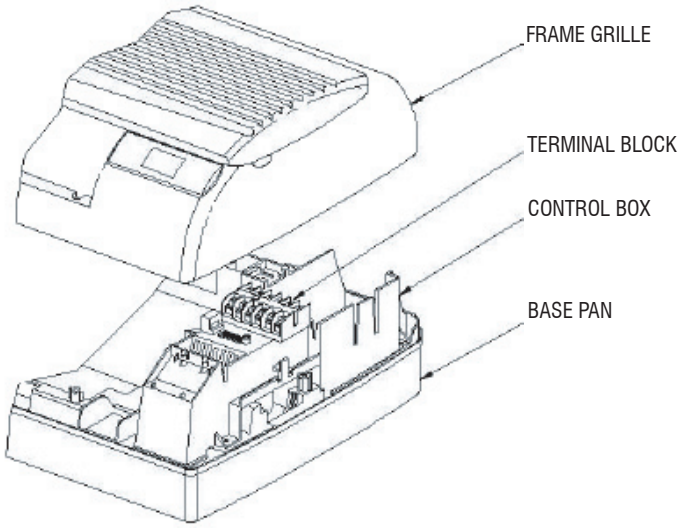
COIL DRAINING

1. Open the water drain valve with a screw driver.
2. Close the water drain valve when no water appears

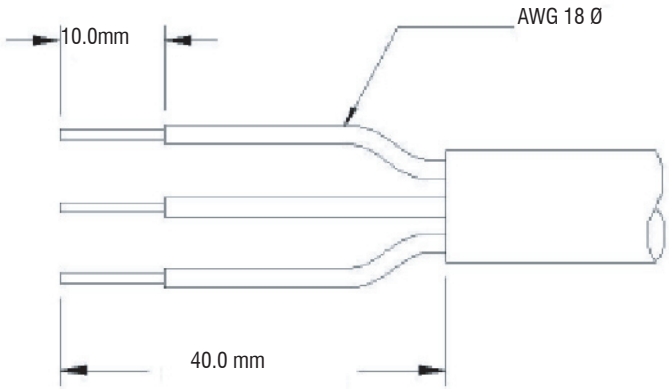


WIRING CONNECTIONS

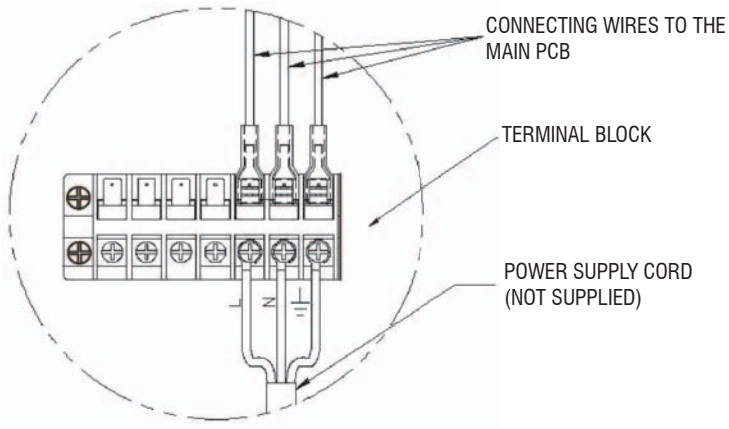
1. After removing the front cover, connect the field wiring.



2. Length of connection cable insulation to be removed.



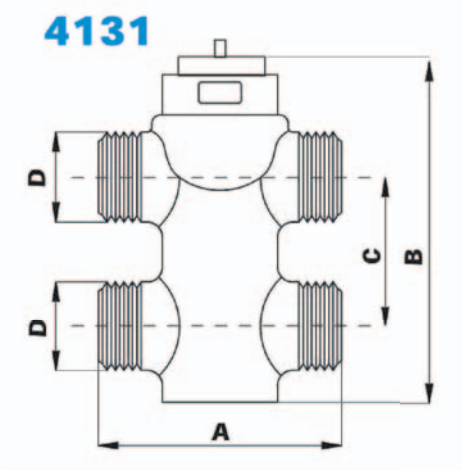
3. Insert the connecting cable fully into the block and secure it by screw tightly.
4. Secure the connecting cable.



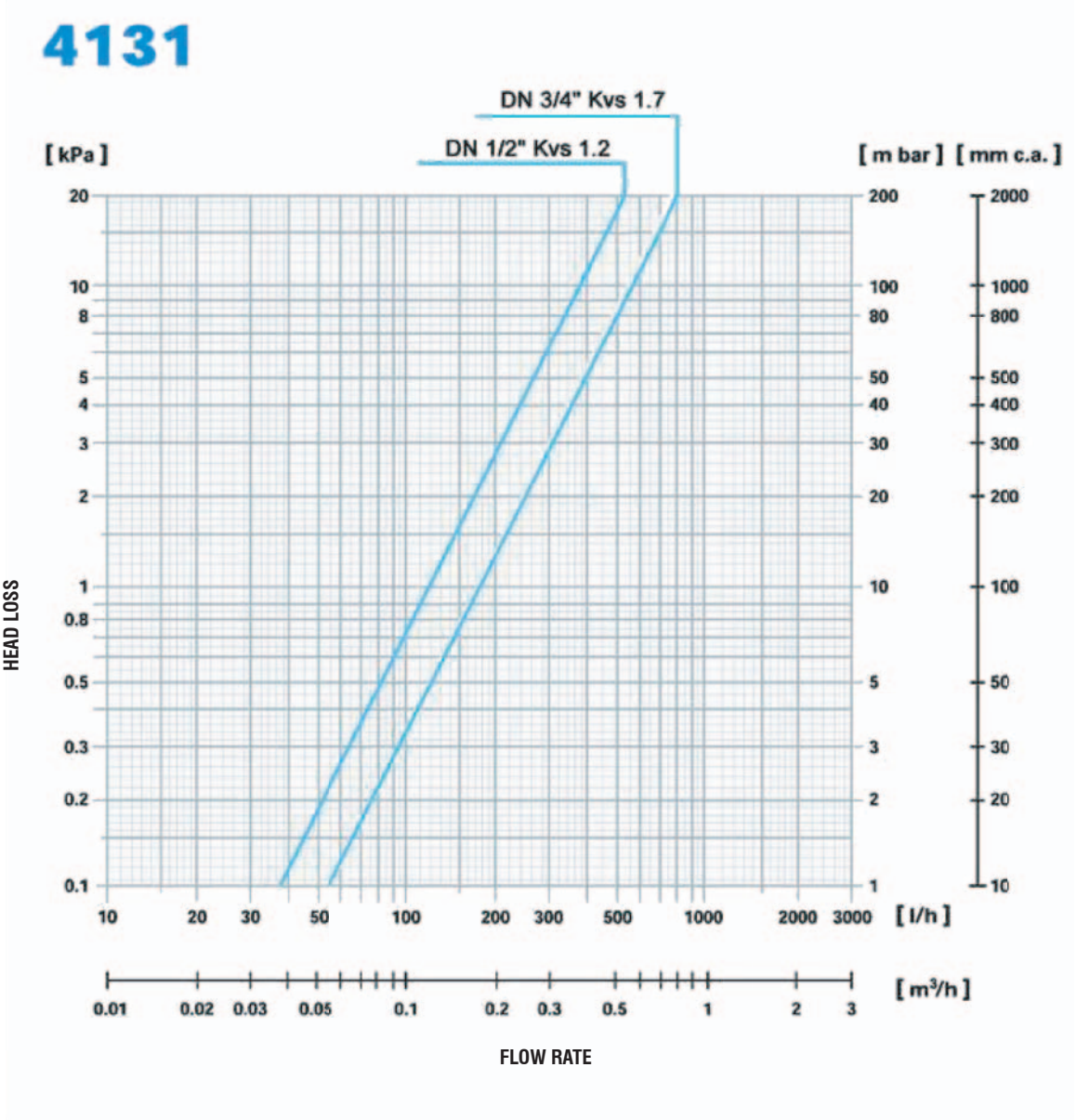
Caution

- Be sure to turn off the main power supply before opening the lift up cover for servicing.
- Always refer to the wiring diagrams supplied.
- Check local electrical codes and also any specific wiring codes.

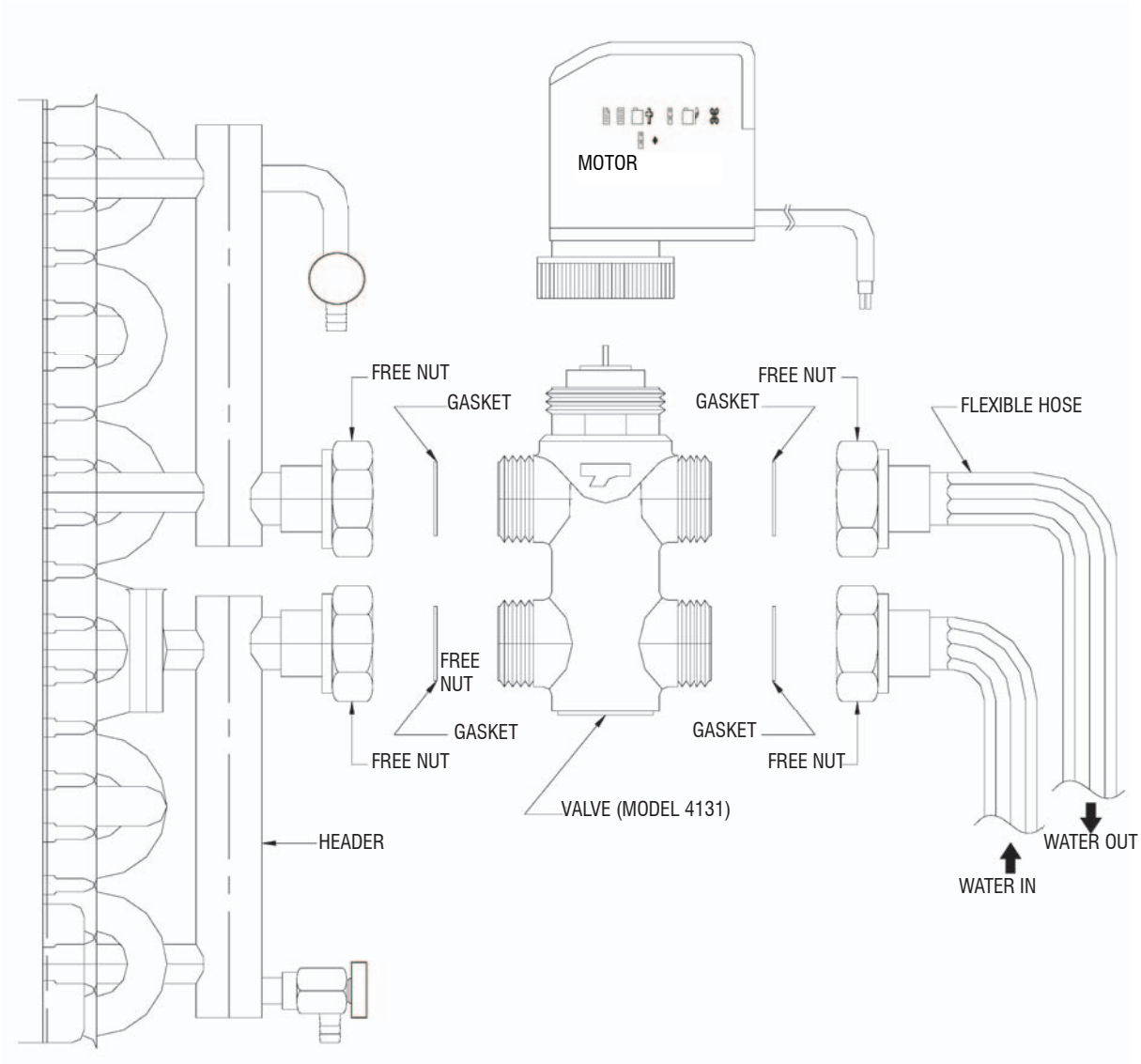
VALVE INFORMATION



Part No.	A	B	C	D
413112	52	83	35	1/2”
413134	56	86	50	3/4”



PIPE CONNECTION WITH VALVE



Note: Add insulation to flexible hoses.

REMOTE CONTROL HANDSET

Ⓐ Sleep Button:
Sleep mode will automatically adjust temperature and save energy when you are sleeping.

Ⓑ Mode Button:
Press button to select Auto Mode, Cool, Dehumidify, Fan or Heat Mode.

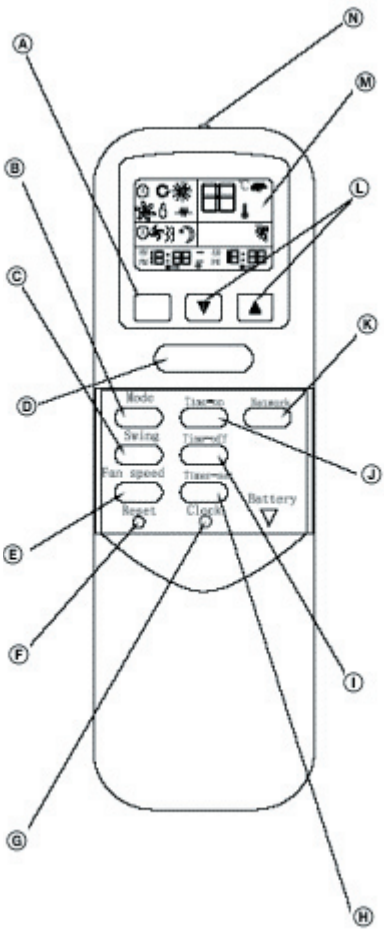
Ⓒ Swing Button:
Air distributor in all mode.

Ⓓ ON/OFF Button:
Pressing this button will turn the air-conditioning unit on or off.
Note: ON/OFF button will not work when continous daily operation is set.

Ⓔ Fan Button:
Press button to select.
Low, Medium, High or Auto Speed.

Ⓕ Reset Button:
Press button to restart remote handset.

Ⓖ Clock Button:
When you change the batteries, you must reset the clock time. After you install the new batteries, the clock time will blink.
Press TIMER-SET button to increase the time by 1 minute step. At last press the clock button again.



Ⓝ Transmission source used for sending control signal to the air-conditioning unit.

Ⓜ LCD DISPLAY

Ⓛ Up Button
Press button to increase temperature 1ºC step. (Max.: 30ºC)
Down button
Press button to decrease temperature 1ºC step. (Min.: 16ºC)

Ⓚ Network Button
You can set all parameters on the master unit.
Then, press the button for 3 seconds, and network icon will appear. All parameters have been sent to slave units.

Ⓙ Timer-on Button
Press the button once, the timer-on icon will blink. Then, press TIMER-SET button to set timer-on in 10 minute steps.
Press the button again and timer-on is set.
Press the button again and timer-on mode is cancelled.

Ⓘ Timer-off Button
Press the button once, the timer-off icon will blink. Then, press TIMER-SET button to set timer-off in 10 minute steps.
Press the button again and timer-off is set.
Press the button again and timer-off mode is cancelled.

Ⓗ Timer-set Button
When you set the time clock, press button to increase by 1 minute step. When you set the timer-on and timer-off, press button to increase by 10 minute step.
Continuous Daily Timer ON and OFF Setting.
Press button for 3 seconds, the set cycle timer-on and timer-off continuous daily operation mode is cancelled.

Ⓐ Dehumidify

Ⓑ Auto

Ⓒ Cooling

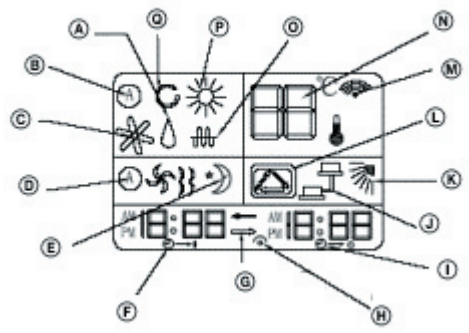
Ⓓ Fan Speed
Auto Low-Med-High

Ⓔ Sleep

Ⓕ Timer-on

Ⓖ Arrow direction is shown from the first function to the second function.

LCD DISPLAY



Ⓗ Clock Icon

Ⓘ Timer-off

Ⓙ Network

Ⓚ Swing

Ⓛ Cycle Timer-on and Timer-off

Ⓜ Signal Sending

Ⓝ Set Temperature

Ⓞ Auxiliary Heating

Ⓟ Heating

Ⓠ Fan

WIRED WALL PAD

Ⓐ Room Temperature Sensor
When using wall pad, the sensor automatically works instead of the main PC's sensor.

Ⓑ Automatic, Cool, Dehumidification, Ventilation.

Ⓒ Unit Number
No.00 is the master unit. You can control all or each of the units by the master unit. No.01-31 are slave units.

Ⓓ Error Mark
If error mark 1 is shown, the room temperature sensor is malfunctioning.
If error mark 2 is shown the condesate pump is malfunctioning.

Ⓔ TIMER ON / TIMER OFF

Ⓕ Error Alarm

Ⓖ Setting Time (hour)

Ⓗ Timer-on / Timer-Off Button
When the unit is on or off, press the button to set timer off or on. On and off may also be selected for continuous daily operation. Press time up or down button to set timer on or off time.

Ⓘ Clock Button
Press the clock button "AM" lights, then press time up or down button set time.

Ⓙ Enter Button
In order to avoid mis-operation, all settings (except ON/OFF Button) are valid after pressing Enter Button.

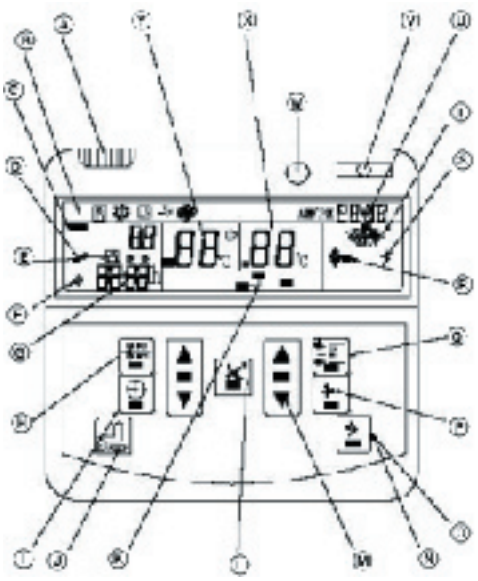
Ⓚ Network icon display
When the icon appears, you can change all or each of the slave units parameters by pressing TIME UP or DOWN button. After you change master unit parameters, press the enter button. The slave units parameters will change.

Ⓥ ON/OFF Button
Pressing the button will turn the unit on or off.

Ⓨ Setting Temperature (ºC)

Ⓧ Room Temperature (ºC)

Ⓦ LED



Ⓛ Swing Button

Ⓜ Temperature Up and Down Button
Press Up Button to increase temperature 1ºC step (Max.: 30ºC)
Press Down Button to decrease temperature 1ºC step (Min.: 16ºC)

Ⓤ AM / PM: Time display

Ⓣ Fan Speed Display
Auto, Low, Medium or High

Ⓢ Sleep Display

Ⓡ Swing Display

Ⓠ Mode Button
Press the button to select Auto, Cool, Dehumidification, Ventilation or Heat mode.

Ⓟ Fan Button
Press the button to select Auto, Low Medium or High Speed.

Ⓞ Sleep Button
Sleep mode will automatically adjust temperature and save energy when you are sleeping.

Ⓝ Network Button
Press the button for 3 seconds, then the network signal will appear. You can control all or each of the slave units by controlling the master unit.

For setting master – slave using wall pad:

1. Open the wall pad's plastic box.
2. You will find the figure shown below in the right corner of the PCB.

3. Unit No.00 is master unit. Cut the wires of 0,1,2,3,4,5.

4. No.01-31 are slave units. The cut wires of 0,1,2,3,4,5 for slave settings as show in the following table:

Unit No.1		Unit No.7		Unit No.13		Unit No.19		Unit No.25		Unit No.31	
Unit No.2		Unit No.8		Unit No.14		Unit No.20		Unit No.26			
Unit No.3		Unit No.9		Unit No.15		Unit No.21		Unit No.27			
Unit No.4		Unit No.10		Unit No.16		Unit No.22		Unit No.28			
Unit No.5		Unit No.11		Unit No.17		Unit No.23		Unit No.29			
Unit No.6		Unit No.12		Unit No.18		Unit No.24		Unit No.30			

CONTROLS SPECIFICATION WITH OR WITHOUT VALVE, WITH MASTER-SLAVE CONTROL AND COMPUTER MANAGEMENT CONTROL

HOT AND CHILLED WALL TYPE FAN COIL WITH OR WITHOUT MOTORIZED VALVE WITH MASTER – SLAVE CONTROL & COMPUTER MANAGEMENT SYSTEM CONTROL

1.0 ABBREVIATIONS

Ts = Setting temperature
Tr = Room air temperature sensor
Ti = Indoor coil temperature sensor
AUX = Auxiliary contact
MTV = Motorized valve

2.0 CONTROL SYSTEM OPERATION

2.A MASTER AND SLAVE UNIT FUNCTION

- The control board can be set either as a master unit or slave unit.

2.A.1 MASTER UNIT FUNCTION

- The master unit sends data on its setting to the slave unit.
- The master unit settings are Unit ON/OFF, Mode, Fan Speed, Set Temperature, Sleep Function and Swing Function.

2.A.2 SLAVE UNIT FUNCTION

- The slave unit receives data on its settings from the master unit.
- The slave unit is allowed to change to a locally desired setting as long as there are no subsequent changes to the settings of the master unit
- The slave units can be set individually for timer on and off function.

2.A.3 MASTER – SLAVE INSTALLATION

- When using remote handset, for the master unit ensure the JP0 jumper is shorted and for the slave units JP0 is opened before turning ON the main power supply.
- When using wired wall pad, JP0 jumper will not function. Use the wall pad to set master and slave units. The wall pad screen will show unit number 00 for master unit, and unit number 01-31 for slave units. See wired wall pad function guide to see how to set master and slave unit.
- Connect master to slave units with telephone wire. NOTE: Use 4-core cable and one-to-one configuration.
- When MAIN POWER SUPPLY is ON:

With motorized valve:	The master unit will respond with 3 beeps. The slave unit will respond with 1 beep.
Without motorized valve:	The master unit will respond with 4 beeps. The slave unit will respond with 2 beeps.

If there are beeping sounds from both master and slave the JP0 on both units is shorted. So, there will be no communication.
If there is no beep sound, no board is set as the master unit. So, no communication will occur.

- Once the master unit receives the signal from the handset, the master unit will send the data. There is a 5 second delay before the master unit sends the data to the slave units in order to avoid undesired data being sent, caused by the user mispressing the button on the handset.
- The slave unit will respond after receiving the data.

2.B COMPUTER MANAGEMENT SYSTEM

- You can connect the control PCB to your computer management system through the RS-485 port direct to your computer telephone port with a telephone line.
- Master-slave can also be operated through the CMS.
- The communication protocol is ASM. You can use your CMS to check all units' status, and control each unit On/Off, Mode, Set Temperature, Valve open or close, Swing function and Fan speed. You cannot control timer.
- The master unit can be connected with 31 slave units with maximum distance of 1 KM.

2.C AIR CONDITIONER ON/OFF

There are 3 ways to turn the system on or off:

- By ON/OFF button on the handset or wired wall pad.
- By programmable timer on the handset or wired wall pad.
- By manual control button on the air conditioner.

2.C POWER ON SETTING

- When power on signal is received by the air conditioner, the Mode, Fan Speed, Set Temperature and Swing settings will be the same as the last handset settings before the last power off.

2.E. COOL MODE

- If Tr>=Ts+1°C, cool operation is activated. MTV is turned on. AUX2 is closed. Indoor fan runs at set speed.
- If Tr<=Ts, cool operation is terminated. MTV is turned off. AUX2 is opened. Indoor fan runs at set speed.
- The range of Ts is 16 to 30 °C.
- Indoor fan speed can be adjusted for low, medium, high and auto.
- When turned on, MTV requires 30 seconds before it is fully open.
- When turned off, MTV requires 120 seconds before it is fully closed.
- When the unit is turned off, indoor fan will delay for 5 seconds before it is turned off.

2.E.1 LOW TEMPERATURE PROTECTION OF INDOOR COIL

- If Ti<=2°C for 2 minutes, MTV is turned off. AUX2 is opened. If indoor fan is set for low speed, it will run at medium speed. If it set at medium or high speed, it will keep running at the same speed.
- If Ti>=5°C for 2 minutes, MTV is turned on. AUX 2 is closed. Indoor fan runs at set speed.

2.E.2 FAN MODE

- Indoor fan runs at the set speed while MTV is turned off. AUX1 and AUX2 are opened.
- Indoor fan speed can be adjusted for low, medium, high and auto.

2.E.3 HEAT MODE

- If Tr<=Ts-1°C, heat operation is activated, MTV is turned on. AUX1 is closed. Indoor fan runs at the set speed.
- If Tr>Ts, heat operation is terminated, MTV is turned off. AUX1 is opened. Indoor fan runs according to POST HEAT condition.
- The range of Ts is 16 to 30 °C.
- Indoor fan speed can be adjusted for low, medium, high and auto.
- When turned on, MTV requires 30 seconds before it is fully open.
- When turned off, MTV requires 120 seconds before it is fully closed.

2.E.3.1 PRE-HEAT

- If Ti<38°C, when MTV is on, AUX1 is closed and indoor fan remains off.
- If Ti>38°C, when MTV is on, AUX1 is closed and Indoor fan runs at set speed.
- If indoor coil temperature sensor is damaged, pre-heat time is set for 2 minutes and indoor fan runs at set speed.

2.E.3.2 POST-HEAT

- If Ti>38°C, when MTV is off, AUX1 is opened and indoor fan continues to run at set speed.
- If Ti<38°C, when MTV is off, AUX1 is opened. Indoor fan runs 30 seconds and stops 3 minutes repeatedly.
- If indoor coil temperature sensor is damaged, post-heat time is set for 3 minutes with indoor fan running at set speed.

2.E.3.3 OVER HEAT PROTECTION OF INDOOR COIL

- If Ti>=75°C, MTV is turned off, AUX1 is opened and indoor fan remains on and runs at set speed.
- If Ti<70°C, MTV is turned on. AUX1 is closed and indoor fan remains on and runs at set speed.
- If indoor coil temperature sensor is damaged, the protection mode will become obsolete and the unit will work as the Pre-heat and Post-heat set times.

2.E.4 DEHUMIDIFICATION MODE

- If Tr>=25°C, MTV will be ON for 3 minutes and OFF for 4 minutes.
- If 16°C<=Tr<25°C, MTV will be ON for 3 minutes and OFF for 6 minutes.
- If Tr<16°C, MTV will be turned off.

2.E.5 AUTO HEAT-DEHUMIDIFICATION-COOL MODE

- In auto mode, the set temperature of the system is 24°C and the indoor fan runs in auto fan mode.
- If Tr<21°C, the unit will operate in heat mode.
- If Tr>25°C, the unit will operate in cool mode.
- If 21°C<=Tr<=25°C, the unit will operate in dehumidification mode.
- Once the unit is turned on in auto mode, it will operate in that mode and will not changeover.
- If the unit has been turned off for 2 hours, when turning on the unit, it will select the operating mode depending on the room temperature.

2.F WITHOUT MOTORIZED VALVE

2.F.1 COOL MODE

- If Tr≥Ts+1°C, cool operation is activated. AUX2 is closed. Indoor fan runs at set speed.
- If Tr<Ts, cool operation is terminated. AUX2 is opened. Indoor fan is turned off.
- The range of Ts is 16 to 30 °C.
- Indoor fan speed can be adjusted for low, medium, high and auto.

2.F.2 HEAT MODE

- If Tr≤Ts-1°C, heat operation is activated, AUX1 is closed. The indoor fan is turned on and runs at the set speed.
- If Tr>Ts, heat operation is terminated, AUX1 is opened. Indoor fan repeatedly runs at low fan speed for 30 seconds and stops for 3 minutes.
- The range of Ts is 16 to 30°C.
- Indoor fan speed can be adjusted for low, medium, high and auto.

2.F.2.1 PRE-HEAT

- If Ti<38°C, AUX1 is opened. Indoor fan remains off.
- If Ti>38°C, AUX1 is closed. Indoor fan runs at set speed.
- If indoor coil temperature sensor is damaged, pre-heat time is set for 2 minutes, and indoor fan runs at set speed.

2.F.2.2 OVER HEAT PROTECTION OF INDOOR COIL

- If Ti≥75°C, when unit is on, AUX1 is opened. Indoor fan remains on and runs at high speed.
- If Ti<70°C, when unit is on, AUX1 is closed. Indoor fan remains on and runs at set speed.
- If indoor coil temperature sensor is damaged, the protection mode will become obsolete and the unit will work as the pre-heat set time.

2.G AUXILIARY CONTACTS

2.G.1 WITH MOTORIZED VALVE

2.G.1.1 COOL MODE (AUX 2)

- AUX 2 is closed when MTV is on (in normal operation).
- AUX 2 is opened when MTV is off or protection of indoor coil is operating.

2.G.1.2 FAN MODE (AUX 1 AND AUX 2)

- AUX 1 and AUX 2 are opened when indoor fan is on.

2.G.1.3 HEAT MODE (AUX 1)

- AUX 1 is closed when MTV is on (in normal operation).
- AUX 1 is opened when MTV is off or protection of indoor coil is operating.

2.G.2 WITHOUT MOTORIZED VALVE

2.G.2.1 COOL MODE (AUX 2)

- AUX 2 is closed when indoor fan is on.
- AUX 2 is opened when indoor fan is off.

2.G.2.2 FAN MODE (AUX 1 AND AUX 2)

- AUX 1 and AUX 2 are opened when indoor fan is on.

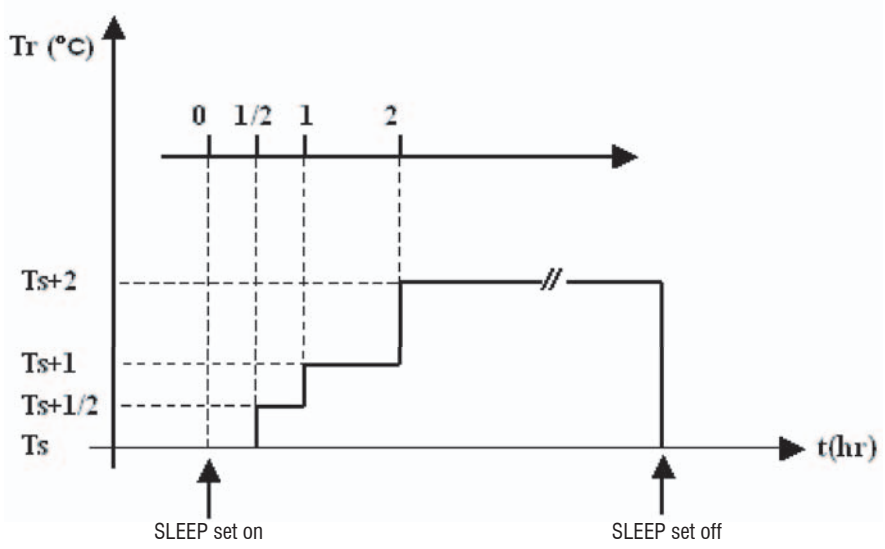
2.G.2.3 HEAT MODE (AUX 1)

- AUX 1 is closed when indoor fan is on.
- AUX 1 is opened when indoor fan is off.

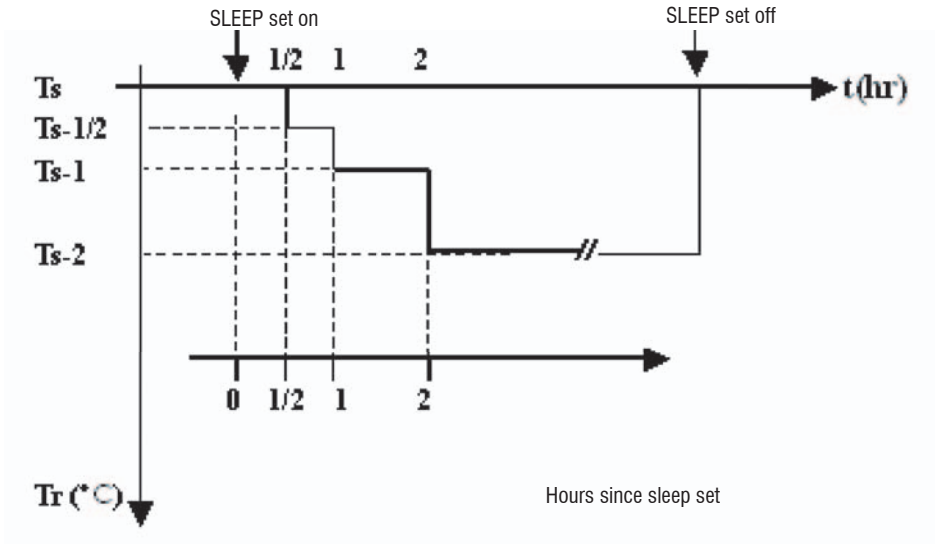
2.H SLEEP MODE

- Sleep mode can only be set in cool or heat modes.
- In cool mode, after sleep mode is set, the indoor fan will run at low speed and Ts will increase 2°C during 2 hours.
- In heat mode, after sleep mode is set, the indoor fan will run at auto fan mode and Ts will decrease 2°C during 2 hours.
- Changing of operation mode will cancel sleep mode.

The COOL mode SLEEP profile is as follow:



The HEAT mode SLEEP profile is as follows:

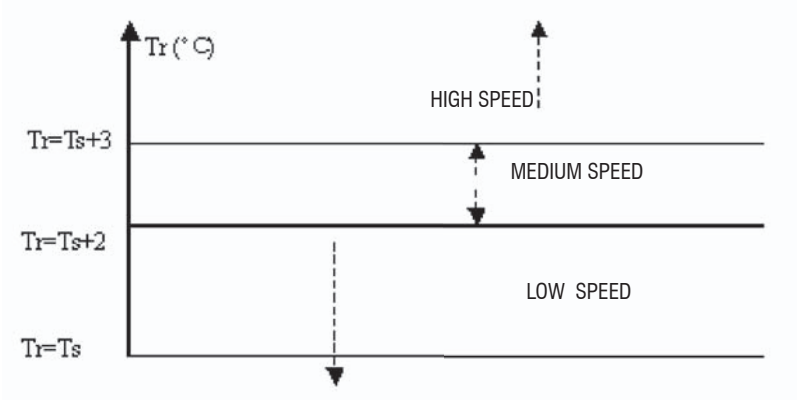


2.I AUTO FAN SPEED

- In COOL mode, if Tr<Ts+2°C, indoor fan runs at low speed.

  If Ts+2°C≤Tr<Ts+3°C, indoor fan runs at medium speed.
  If Tr≥Ts+3°C, indoor fan runs at high speed.

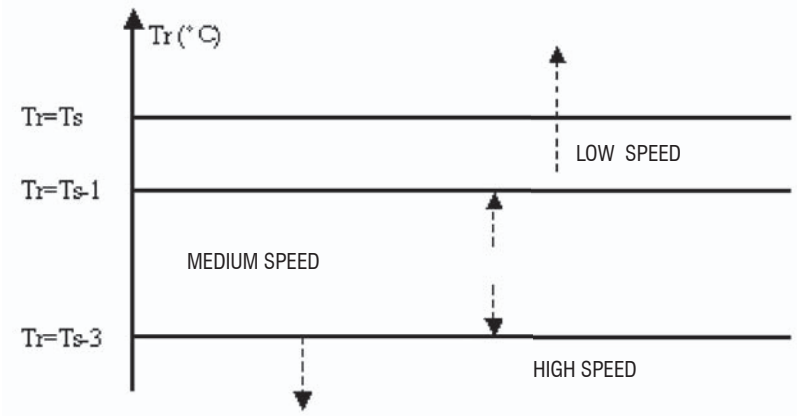
- In COOL mode, the fan speed cannot change until it has run at this speed over 30 seconds.



- In HEAT mode, if Tr≤Ts-1°C, indoor fan runs at low speed.

  If Ts-3°C≤Tr<Ts-1°C, indoor fan runs at medium speed.
  If Tr<Ts-3°C, indoor fan runs at high speed.

- In HEAT mode, the fan speed cannot change until it has run at this speed over 30 seconds.



2.J LOUVER

- If the indoor fan is operating, the louver will swing or can be stopped at a preferred location at any mode.

2.K BUZZER

- If a command is received by the air conditioner, the system will respond with a beep.

2.L AUTO RESTART

- The system uses non-volatile memory to save the present operation parameters when system is turned off or in case of system failure or cessation of power supply. Operation parameters are mode, set temperature, swing, and the fan speed. When power supply resumes or the system is switched on again, the same operations as previously set will function.

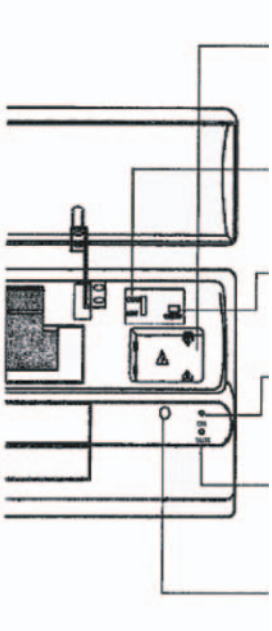
3.0 OPERATION OF CONTROL PANEL ON WALL TYPE FAN COIL

3.A HEAT/COOL SLIDE SWITCH

- This is a double-position slide switch. One position is for cool mode and the other for heat mode. Select position before turning the system on by pressing the manual operation button.
- In cool mode, the set temperature of the system is 24°C with auto fan speed and swing. There are no timer and sleep modes.
- In heat mode, the set temperature of the system is 24°C with auto fan speed and swing. There are no timer and sleep modes.

3.B MANUAL OPERATION BUTTON

- On the unit front panel next to the LED lights is the manual operation button. Press it once and unit will operate according to auto mode.
- This is a 1/2 second touch button.
- Every press of this button will turn the system on or off.
- Select the position of the slide switch (cool or heat) before pressing the button for “ON”, otherwise the system will operate in the previously established mode and settings.



ELECTRICAL SAFETY COVER
Always keep closed. Only to be opened by a qualified technician.

SLIDE SWITCH
Slide this switch to select cooling or heating mode.

MANUAL OPERATION BUTTON
Press this button to stop operation and press it again to start system.

SYSTEM STATUS
Red light means system is on.
When red light is flashing timer is has been set.
When signal has been received light will flash once.

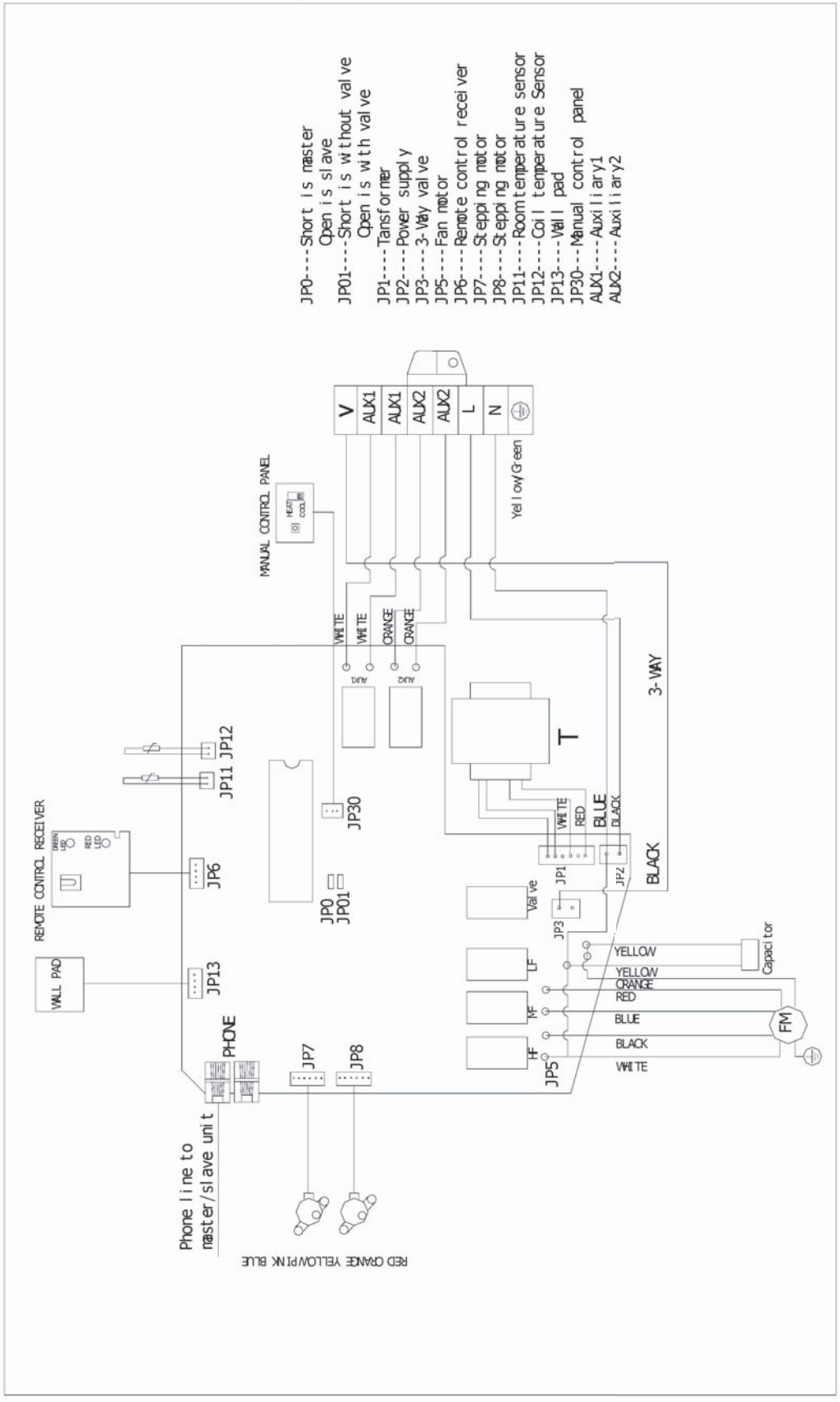
VALVE STATUS
Green light means valve is open.
When not lit valve is closed

RECEIVER FOR INFRA-RED SIGNAL
Receives the signals from remote control handset.

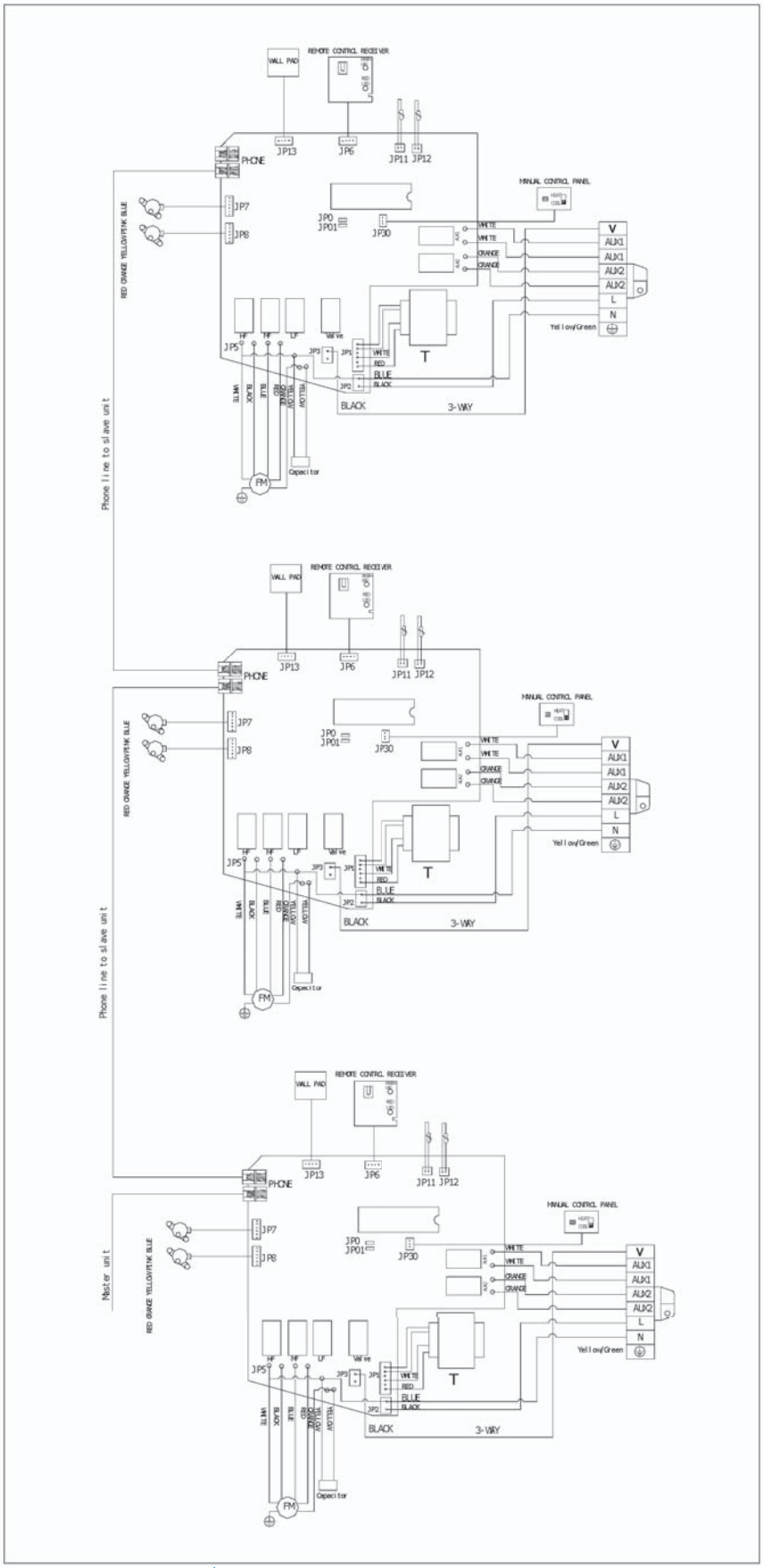
3.C LED LIGHTS

ITEM	RED	GREEN
UNIT IS OPERATING	ON	
3-WAY VALVE IS OPERATING		ON
PRE-HEAT	ON	ON
POST-HEAT	OFF	BLINK
LOW TEMPERATURE PROTECTION OF INDOOR COIL	BLINK	OFF
OVER HEAT PROTECTION OF INDOOR COIL	BLINK	ON
TEMPERATURE SENSOR IS DAMAGED	BLINK	BLINK

CONTROL AND POWER SUPPLY WIRING DIAGRAM



MASTER-SLAVE AND COMPUTER MANAGEMENT CONTROL WIRING DIAGRAM



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