









TECHNICAL AND SERVICE MANUAL

CONTENTS

- 1. FEATURES**
- 2. SPECIFICATIONS & OPERATING RANGE**
- 3. PERFORMANCE CURVES**
- 4. OUTLINE DIMENSIONS**
- 5. OPERATING & INSTALLATION MANUAL**
- 6. REFRIGERATION DIAGRAMS**
- 7. WIRING DIAGRAMS**
- 8. CONTROLS, MAIN P.C.B**
- 9. CONTROL FUNCTION**
- 10. CONTROLS, CHECKING PROCEDURES**
- 11. TROUBLESHOOTING**
- 12. INDOOR AND OUTDOOR PARTS LIST**

☐ MODES OF OPERATION , FUNCTIONS AND FEATURES

The air conditioner is based on a microcomputer control system with remote wall mounted LCD display and control unit, programmed for the following modes and functions:

	COOL	Cools, dehumidifies and filters the room air. Maintains desired site temperature.
	HEAT	Heats and filters the air. Maintains desired site temperature.
	AUTO	Automatically switches from COOLING to HEATING or from HEATING to COOLING, maintaining the desired temperature according to the room conditions.
	DRY	Dehumidifies and moderately cools the room. In DRY Mode the air conditioner operates at an increased dehumidifying power. This function is recommended to be used when temperature is rather cool but the humidity is high.
	FAN	Recalculates and filters the room air. Maintains constant air movement in the room.
	AUTO FAN	The air conditioner automatically selects the FAN speed in accordance to the room temperature. At the start, the unit operates at high fan speed. As the room air gets closer to the desired temperature, the fan switches on a lower speed for quieter operation.
	HOT KEEP	In HEATING and in AUTO FAN, the fan will be turned off when the compressor is not in operation and will not be restarted, unless the indoor coil reaches adequate temperature. This HOT KEEP feature prevents uncomfortable cold air drafts. AUTO FAN is therefore, recommended to be used when the air conditioner is in HEATING mode.
	I FEEL	Switches the temperature sensing point to the place where the remote control is located (in normal operation the temperature sensor is located behind the intake grille of the air conditioner). This function is designed to provide a personalized environment by transmitting the temperature control information from where the remote control is placed. The communication between the remote control and the central control unit is done by infrared signal. When using this function, the remote control should always be aimed without obstructions at the air conditioner.
	TIMER	Real time control and display, automatically turns the air conditioner ON or OFF according to the time of day setting, ensuring comfort conditions before returning home, without wasting electricity. It turns off the air conditioner automatically when sleeping.
	SLEEP	Designed to automatically reset the temperature setting. In COOLING mode the temperature rises one degree centigrade after each consecutive hour, up to three hours, from the start of the mode. In HEATING mode, the reverse occurs, the air conditioner lowers its temperature one degree every hour. When in SLEEP Mode, the operation will automatically turn off after seven hours. This function saves energy when the air conditioner is operating during off hours.


**VERTICAL
AIR SWING**

Automatic swing of supply air in vertical direction. The flap moves automatically in upward and downward direction to spread the conditioned air evenly throughout the room.


**AIR DIRECTION
POSITIONING**

Manual positioning of the air flap to provide desirable air flow angle.


ROOM TEMP.

Measures and displays room temperature.


**FILTER
INDICATION**

Filter indicator on the indoor unit display is turned on when the filter requires cleaning. After cleaning and reinstalling the filter, the system should be reset.

BUZZER

A soft buzzer will sound from the indoor unit display to indicate that a command sent by the remote control has been accepted and stored in the unit's memory. This feature may be easily canceled by the user from the display panel.

**ON UNIT
OPERATION**

The air conditioner can be turned ON for COOLING or HEATING or be turned OFF directly from the indoor unit display panel without the use of the remote control.

**3-MIN DELAYED
RUN**

The compressor is protected by a three minute delayed restart.

MEMORY

The microprocessor retains the last data entry whether or not the unit is plugged in. Therefore, when the unit restarts after a power disruption or power failure, it will resume operation in the same mode as before the power disruption.


LOCK

Freezes the last operation setting on the remote control. When LOCK is activated, the remote control will not be able to control the air conditioner.

Item		Model	WMN - 7 RC		WMN - 7 ST	
Function			Cooling	Heating	Cooling only	
Capacity		Kcal/hr	1820	2050	1820	
		Btu/hr	7300	8200	7300	
		W	2140	2400	2140	
Total input		W	710	660	710	
I N D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	8		
	Running current		A	0.08		
	Starting current		A	0.3		
	External finish		Texture			
	Heat exchanger		Flat fin coil			
	Fan (drive)		Crossflow (direct) x 1			
	Fan motor output		W	5		
	Airflow (LO-HI)		M ³ /hr (CFM)	260-340 (150-200)		
	Operation control type		Remote control LCD			
	Noise level (LO-M-HI)		db(A)	31-35-37		
	Condensate drain I.D		mm.(in)	12.7 (1/12)		
	Dimensions		W	815 (32-1/16)		
			D	164 (6-7/16)		
			H	270 (10-5/8)		
Weight		Kg (lbs)	8.2 (18)			
Packing dimensions		mm.	905X355X260			
Unit stacking		units	8			
O U T D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50 Hz, 220-240V			
	Input		W	700	650	710
	Running current		A	3.1	2.8	3.1
	Starting current		A	13	11	13
	Refrigerant control		Capillary tube			
	Compressor type		Rotary			
	Starter type		Line start			
	Protection device		Thermal overload and electronic			
	Heat exchanger		Flat fin coil			
	Fan (drive) x NO		Propeller (direct) x 1			
	Motor output		W	-	-	-
	Defrost method		Reverse cycle			
	Noise level		db (A)	46		
	Dimensions		W	740		
			D	325		
H			540			
Weight		Kg.(lbs)	30 (66)		29 (64)	
Packing dimensions		mm.	885X312X590			
Unit stacking		units	3			
T U B I N G	Refrigerant		R-22			
	Charge		gr.(lbs)	610	595	
	Tube size OD		liquid mm. (in.)	6.35 (1/4)		
			suction m. (in.)	9.5 (3/8)		
	Connection method between the indoor and outdoor unit.		indoor & outdoor	Flared		
			height diference	MAX. 6M (20FT)		
tubing length			MAX. 10M (33FT)			

Item		Model	WMN - 9 RC		WMN - 9 ST	
Function			Cooling	Heating	Cooling only	
Capacity		Kcal/hr	2250	2700	2250	
		Btu/hr	9000	10800	9000	
		W	2640	3160	2640	
Total input		W	960	930	970	
I N D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	10		
	Running current		A	0.09		
	Starting current		A	0.4		
	External finish		Texture			
	Heat exchanger		Flat fin coil			
	Fan (drive)		Crossflow (direct) x 1			
	Fan motor output		W	6.5		
	Airflow (LO-HI)		M ³ /hr (CFM)	310-390 (180-230)		
	Operation control type		Remote control LCD			
	Noise level (LO-M-HI)		db(A)	32-36-38		
	Condensate drain I.D		mm.(in)	12.7 (1/12)		
	Dimensions		W	815 (32-1/16)		
			D	164 (6-7/16)		
			H	270 (10-5/8)		
Weight		Kg (lbs)	8.2 (18)			
Packing dimensions		mm.	905X355X260			
Unit stacking		units	8			
O U T D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50 Hz, 220-240V			
	Input		W	950	920	960
	Running current		A	4.3	4.2	4.3
	Starting current		A	17	17	17
	Refrigerant control		Capillary tube			
	Compressor type		Rotary			
	Starter type		Line start			
	Protection device		Thermal overload and electronic			
	Heat exchanger		Flat fin coil			
	Fan (drive) x NO		Propeller (direct) x 1			
	Motor output		W	-	-	-
	Defrost method		Reverse cycle			
	Noise level		db (A)	48		
	Dimensions		W	740		
			D	325		
H			540			
Weight		Kg.(lbs)	32 (70)		31 (68)	
Packing dimensions		mm.	885X312X590			
Unit stacking		units	3			
T U B I N G	Refrigerant		R-22			
	Charge		gr.(lbs)	665	610	
	Tube size OD		liquid mm. (in.)	6.35 (1/4)		
			suction m. (in.)	9.5 (3/8)		
	Connection method		indoor & outdoor	Flared		
between the indoor and outdoor unit.		height diference	MAX. 6M (20FT)			
		tubing length	MAX. 12M (40FT)			

Item		Model	WMN - 7+7 RC		WMN - 7+7 ST	
Function			Cooling	Heating	Unit-1	Unit-2
Capacity		Kcal/hr	1820X2	2050X2	1820	1820
		Btu/hr	7300X2	8200X2	7300	7300
		W	2140X2	2400X2	2140	2140
Total input		W	1600	1500	1610	
I N D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	2X8		
	Running current		A	2X0.08		
	Starting current		A	2X0.3		
	External finish			Texture		
	Heat exchanger			Flat fin coil		
	Fan (drive)			Crossflow (direct) x 1		
	Fan motor output		W	2X5		
	Airflow (LO-HI)		M ³ /hr (CFM)	260-340 (150-200)		
	Operation control type			Remote control LCD		
	Noise level (LO-M-HI)		db(A)	31-35-37		
	Condensate drain I.D		mm.(in)	12.7 (1/12)		
	Dimensions		W	815 (32-1/16)		
			D	164 (6-7/16)		
			H	270 (10-5/8)		
	Weight		Kg (lbs)	8.2 (18)		
	Packing dimensions		mm.	905X355X260		
Unit stacking		units	8			
O U T D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50 Hz, 220-240V			
	Input		W	1580	1480	1590
	Running current		A	7.6	7.1	7.6
	Starting current		A	31	28	31
	Refrigerant control			Capillary tube		
	Compressor type			RotaryX2		
	Starter type			Line start		
	Protection device			Thermal overload and electronic		
	Heat exchanger			Flat fin coil		
	Fan (drive) x NO			Propeller (direct) x 1		
	Motor output		W	-	-	-
	Defrost method			Reverse cycle		
	Noise level		db (A)	55		
Dimensions		W	900			
		D	340			
		H	580			
Weight		Kg.(lbs)	70 (154)	66 (145)		
Packing dimensions		mm.	630X985X406			
Unit stacking		units	3			
T U B I N G	Refrigerant		R-22			
	Charge		gr.(lbs)	765X2	765X2	
	Tube size OD		liquid mm. (in.)	6.35 (1/4)		
			suction m. (in.)	9.5 (3/8)		
	Connection method		indoor & outdoor	Flared		
	between the indoor and outdoor unit.		height diference	MAX. 6M (20FT)		
tubing length			MAX. 10M (33FT)			

Item		Model	WMN - 9+9 RC		WMN - 9+9 ST	
Function			Cooling	Heating	Cooling only	
Capacity		Kcal/hr	2640X2	2700X2	2640X2	
		Btu/hr	9000X2	10800X2	9000X2	
		W	2630X2	3160X2	2640X2	
Total input		W	2000	2050	2000	
I N D O O R	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	2X10		
	Running current		A	2X0.9		
	Starting current		A	2X0.4		
	External finish			Texture		
	Heat exchanger			Flat fin coil		
	Fan (drive)			Crossflow (direct) x 1		
	Fan motor output		W	2X6.5		
	Airflow (LO-HI)		M ³ /hr (CFM)	310-390 (180-230)		
	Operation control type			Remote control LCD		
	Noise level (LO-M-HI)		db(A)	32-36-38		
	Condensate drain I.D		mm.(in)	12.7 (1/12)		
	Dimensions		W	815 (32-1/16)		
			D	164 (6-7/16)		
H			270 (10-5/8)			
Weight		Kg (lbs)	8.2 (18)			
Packing dimensions		mm.	905X355X260			
Unit stacking		units	8			
O U T D O O R	Power supply (ph, cy, voltage)		1 ϕ , 50 Hz, 220-240V			
	Input		W	1980	2030	1980
	Running current		A	9.0	9.2	9.0
	Starting current		A	38	40	38
	Refrigerant control			Capillary tube		
	Compressor type			RotaryX2		
	Starter type			Line start		
	Protection device			Thermal overload and electronic		
	Heat exchanger			Flat fin coil		
	Fan (drive) x NO			Propeller (direct) x		
	Motor output		W	-	-	-
	Defrost method			Reverse cycle		
	Noise level		db (A)	59		
	Dimensions		W	900		
D			340			
H			580			
Weight		Kg.(lbs)	74 (163)		70 (154)	
Packing dimensions		mm.	630X985X406			
Unit stacking		units	3			
T U B I N G	Refrigerant		R-22			
	Charge		gr.(lbs)	830X2	775X2	
	Tube size OD		liquid mm. (in.)	6.35 (1/4)		
			suction m. (in.)	9.5 (3/8)		
	Connection method		indoor & outdoor	Flared		
	between the indoor and outdoor unit.		height diference	MAX. 6M (20FT)		
tubing length			MAX. 12M (40FT)			

Item		Model	WMN - 7+9 RC		WMN - 7+9 ST	
			Cooling		Heating	
Function			Unit-1	Unit-2	Unit-1	Unit-2
Capacity		Kcal/hr	1820	2250	2050	2700
		Btu/hr	7300	9000	8200	10800
		W	2140	2640	2400	3160
Total input		W	1800		1760	
Power supply (ph, cy, voltage)			1 ϕ , 60Hz, 220-240V			
I N D O O R	Input	W	8	10	8	10
	Running current	A	0.08	0.09	0.08	0.09
	Starting current	A	0.3	0.4	0.4	0.4
	External finish		Texture			
	Heat exchanger		Flat fin coil			
	Fan (drive)		Crossflow (direct) x 1			
	Fan motor output	W	17	15	17	15
	Airflow (LO-HI)	M ³ /hr (CFM)	260-340 150-200	310-390 180-230	260-340 150-200	310-390 180-230
	Operation control type		Remote control LCD			
	Noise level (LO-M-HI)	db(A)	31-35-37	32-36-38	31-36-37	32-36-38
Condensate drain I.D	mm.(in)	12.7 (1/2)				
D I M E N S I O N S	Dimensions	W	808 (31-13/16)			
		D	164 (6-7/16)			
		H	368 (14-1/2)			
Weight	Kg (lbs)	8.2 (18)				
Packing dimensions	mm.	905X355X260				
Unit stacking	units	8				
O U T D O O R	Power supply (ph, cy, voltage)		1 ϕ , 50 Hz, 220-240V			
	Input	W	1785		1740	
	Running current	A	8.1		8.0	
	Starting current	A	32		32	
	Refrigerant control		Capillary tube			
	Compressor type		Rotary			
	Starter type		Line start			
	Protection device		Thermal overload and electronic			
	Heat exchanger		Flat fin coil			
	Fan (drive) x NO		Propeller (direct) x 1			
Motor output	W	-		-		
Defrost method		Reverse cycle				
Noise level	db (A)	55				
D I M E N S I O N S	Dimensions	W	900			
		D	340			
		H	580			
Weight	Kg.(lbs)	73 (161)				
Packing dimensions	mm.	630X985X406				
Unit stacking	units	3				
Refrigerant		R-22				
Charge	gr.(lbs)	1020	765	1020	765	
T U B E S I Z E	Tube size OD	liquid mm. (in.)	6.35 (1/4)			
		suction m. (in.)	9.5 (3/8)			
C O N N E C T I O N	Connection method	indoor & outdoor	Flared			
	between the indoor and	height diference	MAX. 6M (20FT)			
	outdoor unit.	tubing length	MAX. 10M (33FT)		MAX. 12M (40FT)	

note: Unit-1 = WMN-7
Unit-2 = WMN-9

Item		Model	WMN -12 RC		WMN -12 ST	
Function			Cooling	Heating	Cooling only	
Capacity		Kcal/hr	2900	3075	2900	
		Btu/hr	11600	12300	11600	
		W	3400	3600	3400	
Total input		W	1300	1310	1310	
I N D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	15		
	Running current		A	0.1		
	Starting current		A	0.5		
	External finish		Texture			
	Heat exchanger		Flat fin coil			
	Fan (drive)		Crossflow (direct) x 1			
	Fan motor output		W	6.5		
	Airflow (LO-HI)		M ³ /hr (CFM)	340-450 (200-265)		
	Operation control type		Remote control LCD			
	Noise level (LO-M-HI)		db(A)	33-36-40		
	Condensate drain I.D		mm.(in)	12.7 (1/12)		
	Dimensions		W	mm.(in) 815 (32-1/16)		
			D	mm.(in) 164 (6-7/16)		
			H	mm.(in) 270 (10-5/8)		
	Weight		Kg (lbs)	8.2 (18)		
	Packing dimensions		mm.	905X355X260		
Unit stacking		units	8			
O U T D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50 Hz, 220-240V			
	Input		W	1290	1310	1290
	Running current		A	6.1	6.2	6.1
	Starting current		A	26	26	26
	Refrigerant control		Capillary tube			
	Compressor type		Rotary			
	Starter type		Line start			
	Protection device		Thermal overload and electronic			
	Heat exchanger		Flat fin coil			
	Fan (drive) x NO		Propeller (direct) x 1			
	Motor output		W	-	-	-
	Defrost method		Reverse cycle			
	Noise level		db (A)	55		
Dimensions		W	mm. (in.) 740			
		D	mm. (in.) 325			
		H	mm. (in.) 540			
Weight		Kg.(lbs)	43 (95)	42 (92)		
Packing dimensions		mm.	576X340X825			
Unit stacking		units	3			
T U B I N G	Refrigerant		R-22			
	Charge		gr.(lbs)	1020	1020	
	Tube size OD		liquid mm. (in.)	6.35 (1/4)		
			suction m. (in.)	12.7(1/2)		
	Connection method between the indoor and outdoor unit.		indoor & outdoor		Flared	
height diference			MAX. 6M (20FT)			
tubing length			MAX. 12M (40FT)			

Item		Model	WMN 9+12 - ST		
			Cooling only		
Function			Unit-1	Unit-2	
Capacity		Kcal/hr	2900	2250	
		Btu/hr	11600	9000	
		W	3400	2640	
Total input		W	2350	2350	
I N D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V		
	Input		W	15	10
	Running current		A	0.1	0.09
	Starting current		A	0.5	0.4
	External finish		Texture		
	Heat exchanger		Flat fin coil		
	Fan (drive)		Crossflow (direct) x 1		
	Fan motor output		W	9	6.5
	Airflow (LO-HI)		M ³ /hr (CFM)	340-450 200-265	310-390 180-230
	Operation control type		Remote control LCD		
	Noise level (LO-M-HI)		db(A)	33-40	32-38
	Condensate drain I.D		mm.(in)	16 (5/8)	
	Dimensions		W	815 (32-1/16)	
			D	164 (6-7/16)	
			H	270 (10-5/8)	
Weight		Kg (lbs)	8.2 (18)		
Packing dimensions		mm.	905X355X260		
Unit stacking		units	8		
O U T D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V		
	Input		W	2376	2376
	Running current		A	11.2	11.2
	Starting current		A	45	45
	Refrigerant control		Capillary tube		
	Compressor type		Rotary		
	Starter type		Line start		
	Protection device		Thermal overload and electronic		
	Heat exchanger		Flat fin coil		
	Fan (drive) x NO		Propeller (direct) x 1		
	Motor output		W	-	-
	Defrost method		Reverse cycle		
	Noise level		db (A)	58	
	Dimensions		W	900	
			D	340	
H			580		
Weight		Kg.(lbs)	72 (163)		
Packing dimensions		mm.	630X985X406		
Unit stacking		units	3		
T U B I N G	Refrigerant		R-22		
	Charge		gr.(lbs)	990	650
	Tube size OD		liquid mm. (in.)	6.35 (1/4)	6.35 (1/4)
			suction m. (in.)	12.7 (1/2)	9.5 (3/8)
	Connection method		indoor & outdoor		
between the indoor and outdoor unit.		height diference	MAX. 6M (20FT)	MAX. 6M (20FT)	
		tubing length	MAX. 16M (52FT)	MAX. 16M (52FT)	

Item		Model		WMN - 9+12 RC		WMN - 9+12 RC			
				Cooling		Heating			
Function				Unit-1	Unit-2	Unit-1	Unit-2		
Capacity		Kcal/hr		2900	2250	3075	2700		
		Btu/hr		11600	9000	12300	10800		
		W		3400	2640	3600	3165		
Total input		W		2350		2210			
I N D O O R U N I T	Power supply (ph, cy, voltage)				1 ϕ , 50Hz, 220-240V				
		Input	W		15	10	15	10	
		Running current	A		0.1	0.09	0.1	0.09	
		Starting current	A		0.5	0.4	0.5	0.4	
		External finish				Texture			
		Heat exchanger				Flat fin coil			
		Fan (drive)				Crossflow (direct) x 1			
		Fan motor output		W		9	6.5	9	6.5
		Airflow (LO-HI)		M ³ /hr (CFM)		340-450 200-265	310-390 180-230	340-450 200-265	310-390 180-230
		Operation control type				Remote control LCD			
		Noise level (LO-M-HI)		db(A)		33-40	32-38	33-40	32-38
		Condensate drain I.D		mm.(in)		16 (5/8)			
		Dimensions	W	mm.(in)	815 (32-1/16)				
			D	mm.(in)	164 (6-7/16)				
			H	mm.(in)	270 (10-5/8)				
		Weight		Kg (lbs)		8.2 (18)			
		Packing dimensions		mm.		905X355X260			
	Unit stacking		units		8				
O U T D O O R U N I T	Power supply (ph, cy, voltage)				1 ϕ , 50Hz, 220-240V				
		Input	W		2376		2236		
		Running current	A		11.2		10.5		
		Starting current	A		45		42		
		Refrigerant control				Capillary tube			
		Compressor type				Rotary			
		Starter type				Line start			
		Protection device				Thermal overload and electronic			
		Heat exchanger				Flat fin coil			
		Fan (drive) x NO				Propeller (direct) x 1			
		Motor output		W		-	-	-	-
		Defrost method				Reverse cycle		-	
		Noise level		db (A)		5			
	Dimensions	W	mm. (in.)	900					
		D	mm. (in.)	340					
		H	mm. (in.)	580					
	Weight		Kg.(lbs)		73 (161)				
	Packing dimensions		mm.		630X985X406				
	Unit stacking		units		3				
T U B I N G	Refrigerant				R-22				
	Charge		gr.(lbs)		1020	710	1020	710	
	Tube size OD	liquid mm. (in.)				6.35 (1/4)			
		suction mm. (in.)				12.7	9.5	12.7	9.5
	Connection method between the indoor and outdoor unit.		indoor & outdoor		Flared				
		height diference		MAX. 6M (20FT)					
		tubing length		MAX. 16M (52FT)					


Item		Model	WMN -2X12 RC		WMN - 2X12 ST	
Function			Cooling	Heating	Cooling only	
Capacity		Kcal/hr	2900x2	3075X2	2900x2	
		Btu/hr	11600x2	12300X2	11600x2	
		W	3400x2	3660X2	3400x2	
Total input		W	2720	2680	2720	
I N D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	15	38	
	Running current		A	0.1	0.17	
	Starting current		A	0.5	0.7	
	External finish		Texture			
	Heat exchanger		Flat fin coil			
	Fan (drive)		Crossflow (direct) x 1			
	Fan motor output		W	17		
	Airflow (LO-HI)		M ³ /hr (CFM)	340-450 (200-265)		
	Operation control type		Remote control LCD			
	Noise level (LO-HI)		db(A)	33-44		
	Condensate drain I.D		mm.(in)	16 (5/8)		
	Dimensions		W	815 (32-1/16)		
			D	164 (6-7/16)		
			H	270 (10-5/8)		
	Weight		Kg (lbs)	8.2 (18)		
	Packing dimensions		mm.	905X355X260		
Unit stacking		units	8			
O U T D O O R U N I T	Power supply (ph, cy, voltage)		1 ϕ , 50Hz, 220-240V			
	Input		W	2690	2650	2690
	Running current		A	12.7	12.5	12.7
	Starting current		A	50	50	50
	Refrigerant control		Capillary tube			
	Compressor type		Rotary			
	Starter type		Line start			
	Protection device		Thermal overload and electronic			
	Heat exchanger		Flat fin coil			
	Fan (drive) x NO		Propeller (direct) x 1			
	Motor output		W	-	-	-
	Defrost method		Reverse cycle			
	Noise level		db (A)	59		
	Dimensions		W	900		
			D	340		
			H	580		
	Weight		Kg.(lbs)	74 (163)	70 (154)	
Packing dimensions		mm.	630X985X406			
Unit stacking		units	3			
T U B I N G	Refrigerant		R-22			
	Charge		gr.(lbs)	960*	1100*	910* 1050*
	Tube size OD		liquid mm. (in.)	6.35 (1/4)		
			suction m. (in.)	12.7(1/2)		
	Connection method between the indoor and outdoor unit.		indoor & outdoor	Flared		
			height diference	MAX. 6M (20FT)		
		tubing length	MAX. 12M (40FT)			

notes: * Unit 1 - For exact charge refer to outdoor unit nameplate.

** Unit 2 - For exact charge refer to outdoor unit nameplate

WALL MOUNTED SPLIT A/C

SPECIFICATIONS & OPERATING RANGE

Item □	Model □		WMN-18/ONG3-17ST	WMN-18/ONG3-17RC	
Function			Cooling	Cooling	Heating
Capacity	Kal/hr		4300	4300	4530
	Btu/hr		17000	17000	18000
	W		5000	5000	5270
Total Input	W		1970	1970	1820
Running Current	A		8.6	8.6	7.9
Power Supply (ph, cy, voltage)			Single , 50Hz , 220-240V,R407C		
I N D O O R U N I T	External finish		Texture		
	Heat exchanger		Hydrophilic louver fin coil		
	Fan (drive)		Crossflow		
	Fan motor output	W	18		
	Airflow (Hi)	m3/h	830		
	Operation control type		Remote control LCD		
	Noise level(Hi)	dB(A)	40 42 46		
	Condensate drain I.D.	mm(in)	16		
	Dimensions	W	mm	1115	
		D	mm	200	
		H	mm	330	
	Weight	kg	14		
	Packing dimensions	mm	1200x300x420		
	Unit stacking	units	7		
O U T D O O R U N I T	Starting Current	A	45		
	Refrigerant control		Capillary tube		
	Compressor type		Rotary		
	Compressor Model		PG330X2CS-4KT3		
	Starter type		Line start		
	Protection device		Internal		
	Heat exchanger		Bare louver fin	Hydropylic louver fin coil	
	Fan (drive) x No.		Propeller (direct) x 1		
	Motor output	W	35		
	Defrost method		/	Reverse cycle	
	Noise level	dB(A)	54		
	Dimensions	W	mm	795	
		D	mm	290	
		H	mm	610	
Weight	kg	43			
Packing dimensions	mm.	945*395*655			
Unit stacking	units	3 levels, 9 units per pallet			
T U B I N G	Refrigerant		R-407C		
	Charge(7.5m)	g	1250		
	Tube size	liquid	mm(in)	6.35(1/4")	
		suction	mm(in)	12.7(1/2")	
	Connection method between the indoor and outdoor unit	indoor & outdoor		Flared	
		height difference		Max. 10m	
tubing length		Max. 25m			
		ELECTRA AIR CONDITIONING CO., LTD.		Rev.01 Jan 2002	SERIES: WMN

SPECIFICATIONS

2

Item		Model		WMN-24R RC		WMN-24R ST	
				Cooling	Heating	Cooling Only	
Function				Cooling	Heating	Cooling Only	
Capacity		Kal/hr		5431	5603	5431	
		Btu/hr		21496	22178	21496	
		W		6300	6500	6300	
Total Input		W		2450	2390	2360	
Running Current		A		11.6	11.5	11.5	
Power Supply (ph, cy, voltage)				single , 50HZ , 230V			
I N D O O R U N I T	External finish			Texture			
	Heat exchanger			Hydropyllic louver fin coil			
	Fan (drive)			Crossflow			
	Fan motor output		W	30			
	Airflow (Hi)		m/hr	910			
	Operation control type			Remote control LCD			
	Noise level(Lo-M-Hi)		db(A)	45 48 50			
	Condensate drain I.D.		mm	15.88			
	Dimensions		W	mm	1070		
			D	mm	220		
			H	mm	330		
	Weight		Kg	14			
	Packing dimensions		mm	1200 x 420 x 300			
Unit stacking		units	8				
O U T D O O R U N I T	Refrigerant control			Capillary tube			
	Compressor type			Rotary			
	Model			QP407JT24A			
	Starter type			Line start			
	Protection device			Temp. Klicson			
	Heat exchanger			Hydropyllic louver fin	Flat louver fin coil		
	Fan (drive) x No.			Propeller (direct) x 1			
	Motor output		W	140			
	Defrost method			Reverse cycle			
	Noise level		db(A)	60			
	Dimensions		W	mm	846		
			D	mm	302		
			H	mm	690		
Weight		Kg.	58	57			
Packing dimensions		mm.	990 x 430 x 770				
Unit stacking		units	3				
T U B I N G	Refrigerant			R - 22			
	Charge		gr.(lbs)	1930	1930		
	Tube size		liquid mm.	9.53			
	O.D.		suction mm.	15.88			
	Connection method		indoor & outdoor	Flared			
	between the indoor and outdoor unit		height difference	Max. 10m			
tubing length			Max. 16m				
ELECTRA AIR CONDITIONING CO., LTD.				REV. 01 10/01	SERIES: WMN2		

NOTES:

1. Rating conditions ISO DIS 5151

Cooling: indoor : 27°C (80°F) DB 19.5°C (67°F) WB
 Outdoor : 35°C (95°F) DB

Heating :indoor : 21°C (70°F) DB
 Outdoor : 7°C (45°F) DB 5°C (43°F) WB

Refrigerant tubing length (one way) 5m (16ft)

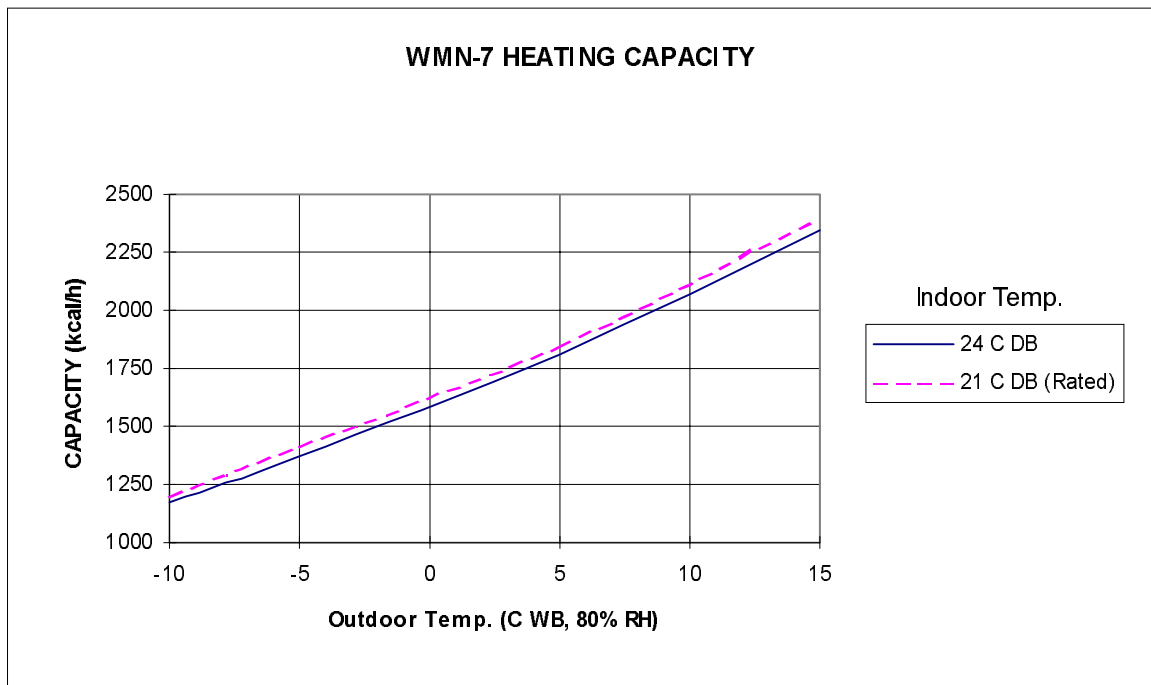
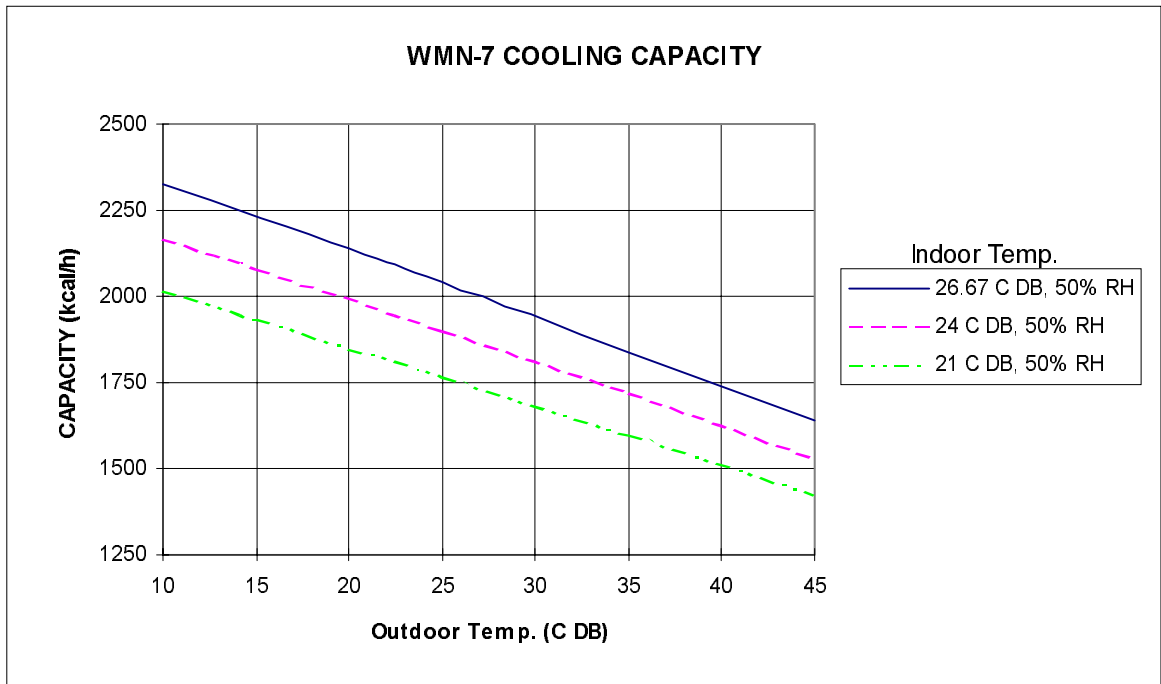
2. Guaranteed operating range:

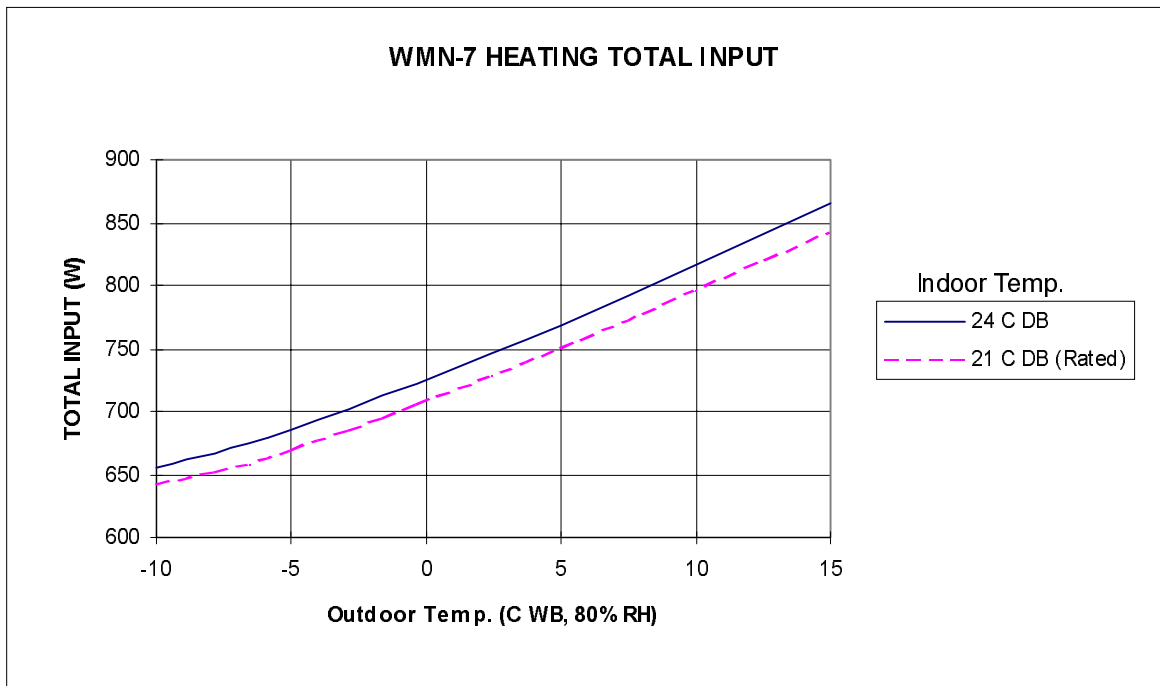
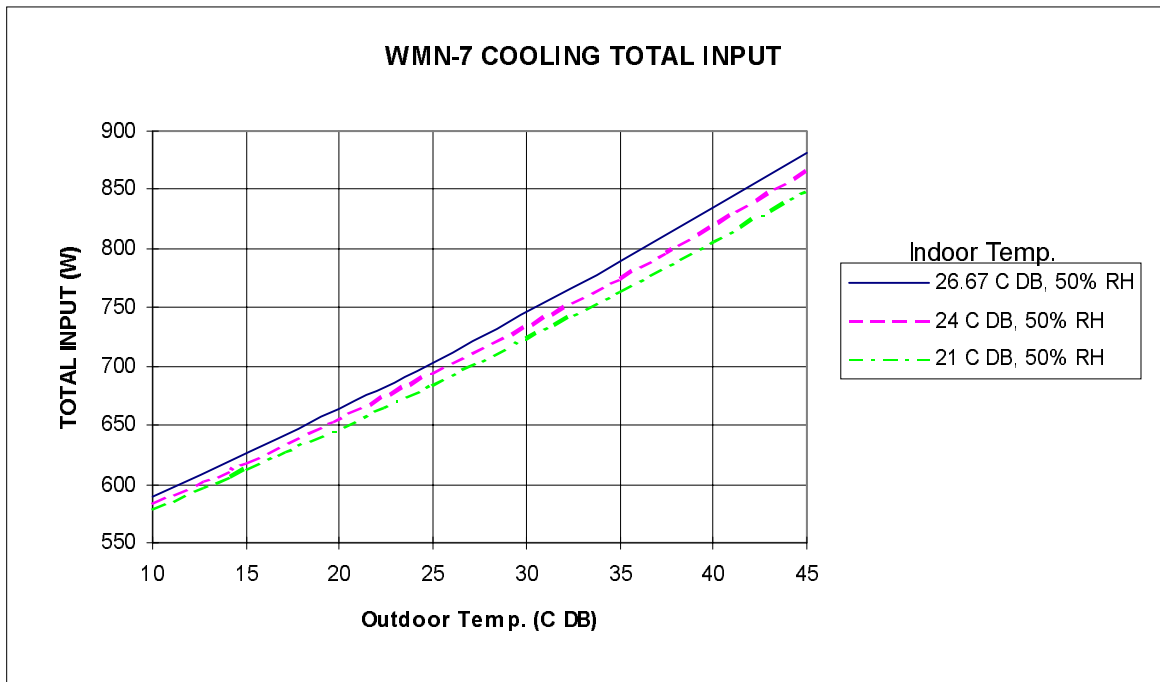
		Indoor	Outdoor
Cooling	Upper limit	32°C DB, 23°C WB	46°C DB
	Lower limit	21°C DB, 15°C WB	10°C DB
Heating	Upper limit	27°C DB	21°C DB, 15.5°C WB
	Lower limit	20°C DB	-5°C DB, -6.5°C WB
Voltage		193 - 250v	

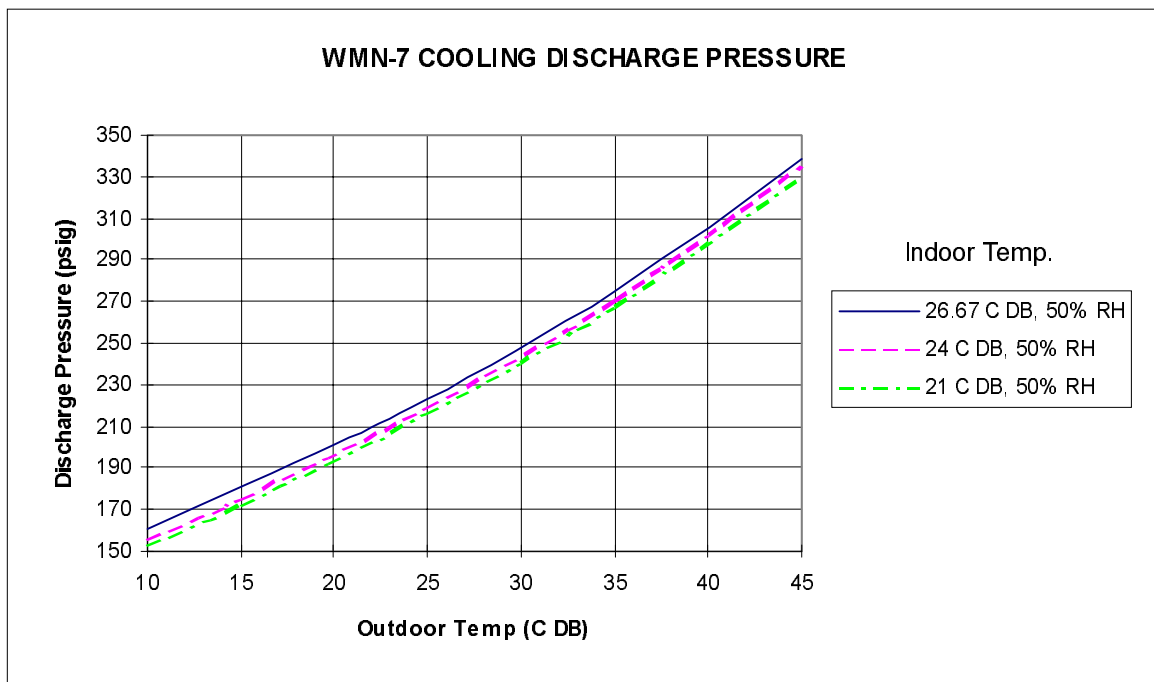
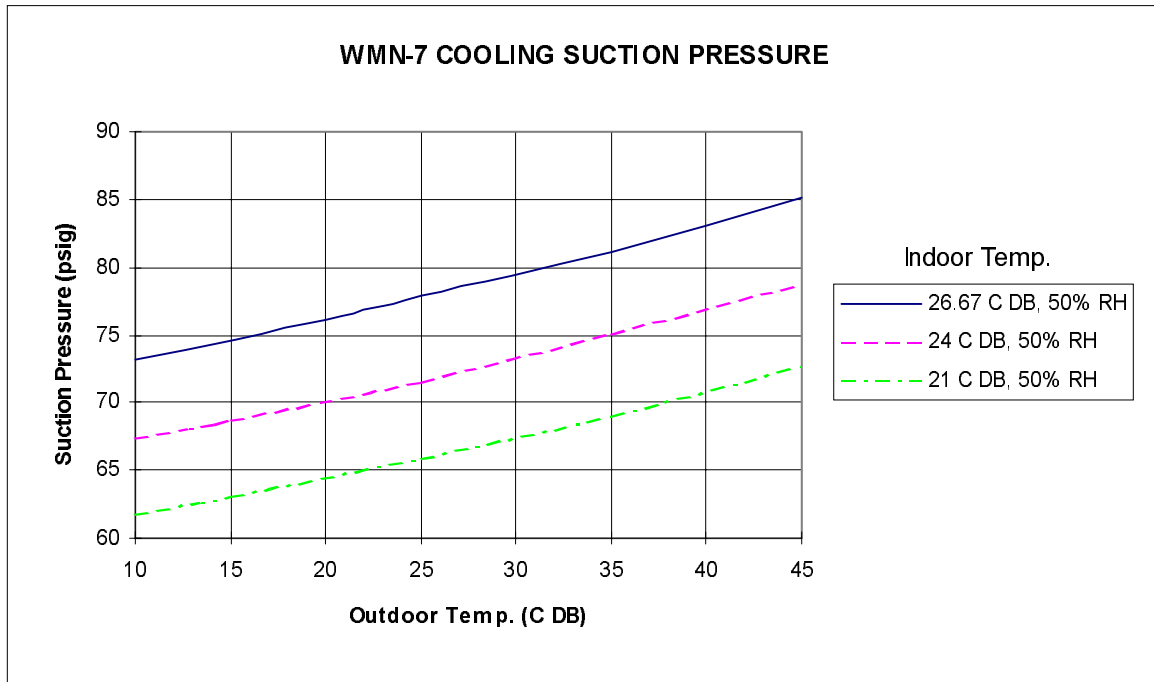
3. Above data based on indicated voltage

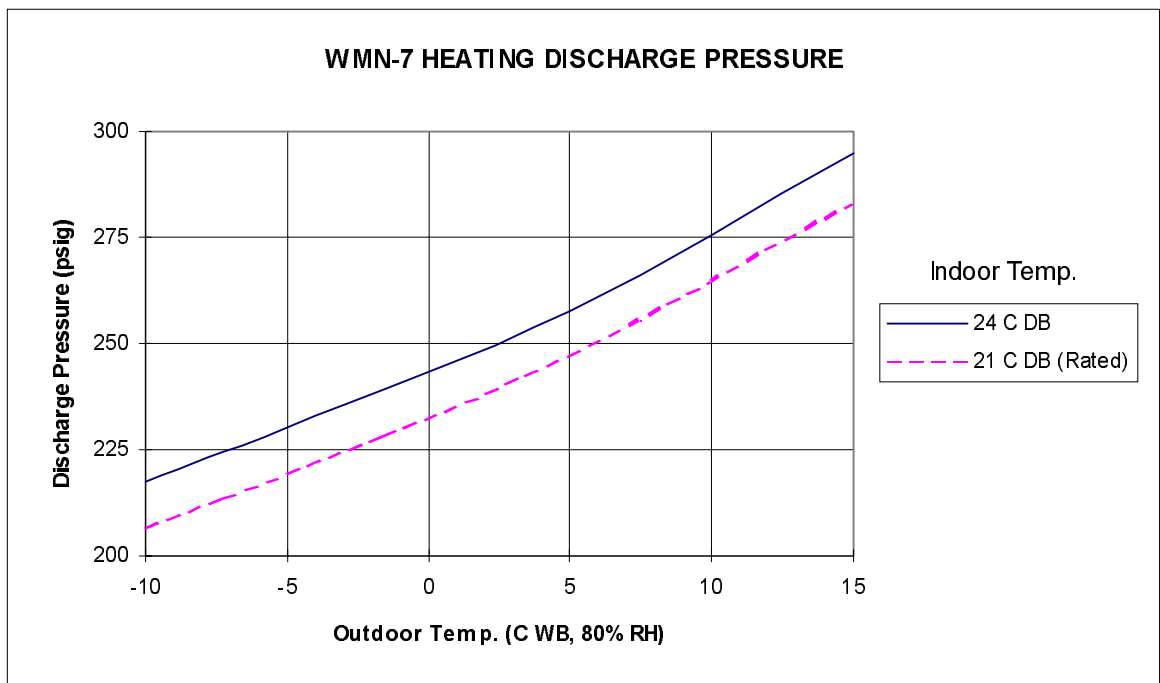
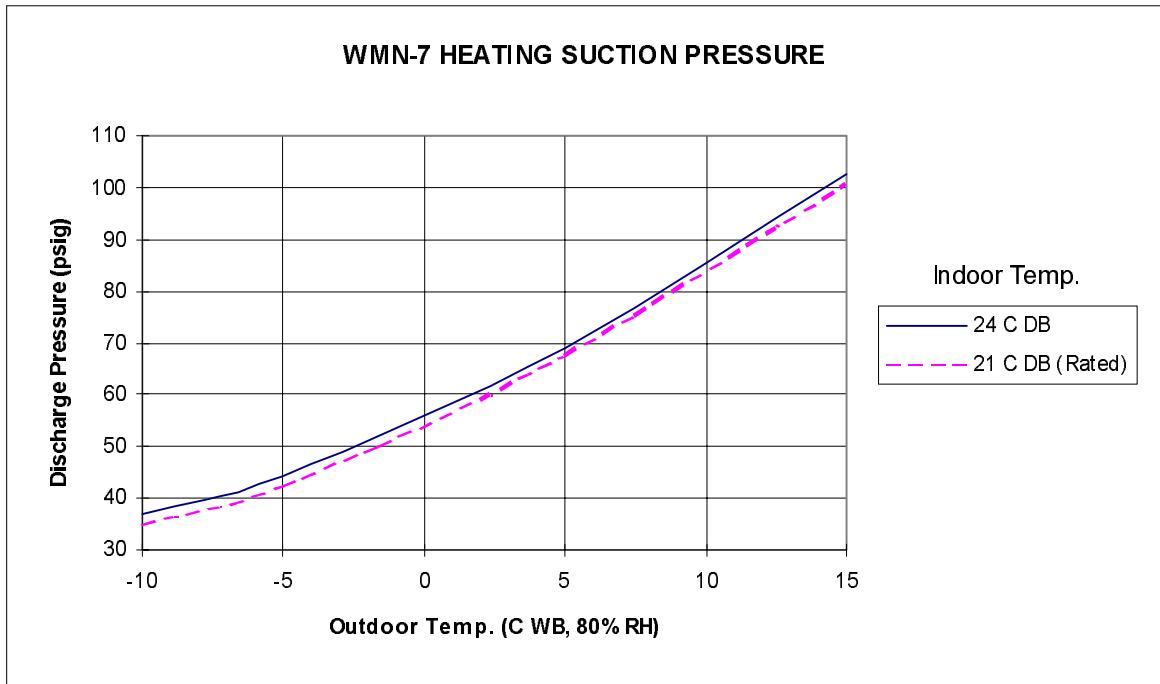
indoor : 1 ϕ , 230v, 50Hz.

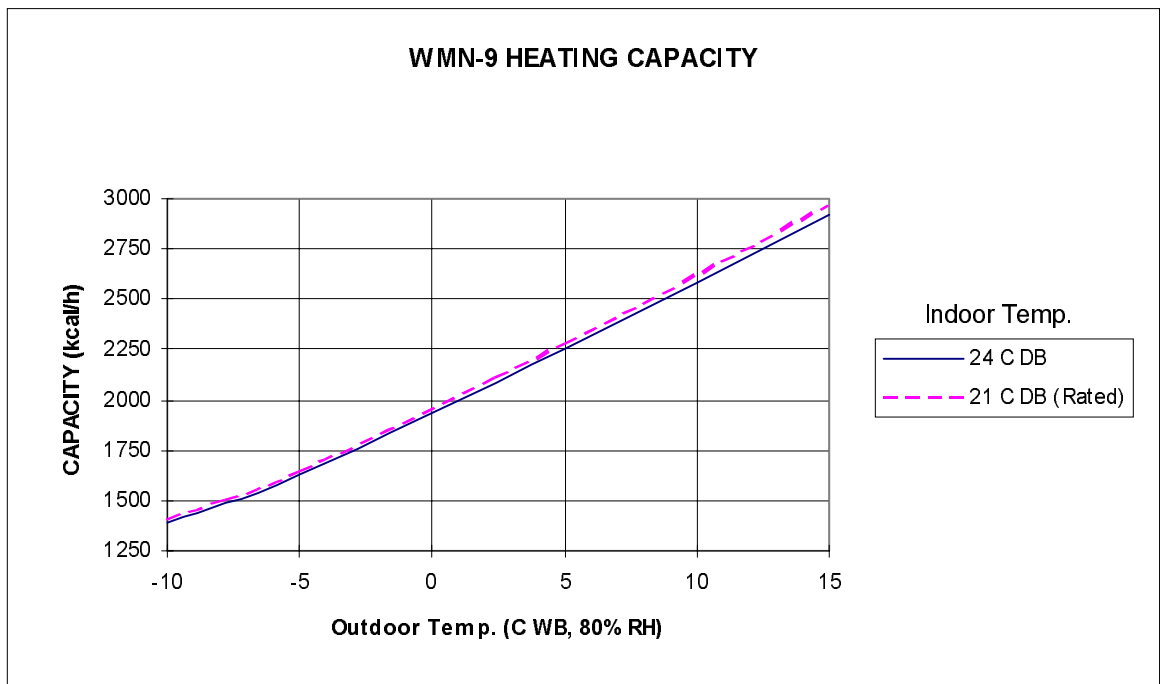
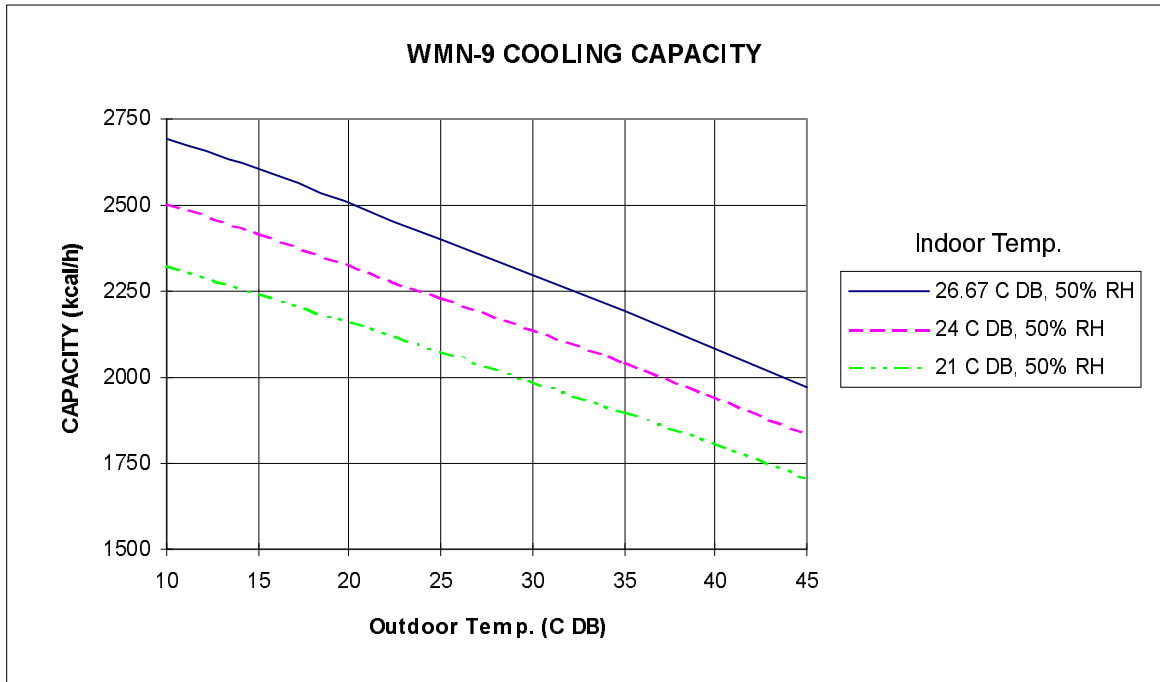
outdoor : 1 ϕ , 230v, 50Hz.

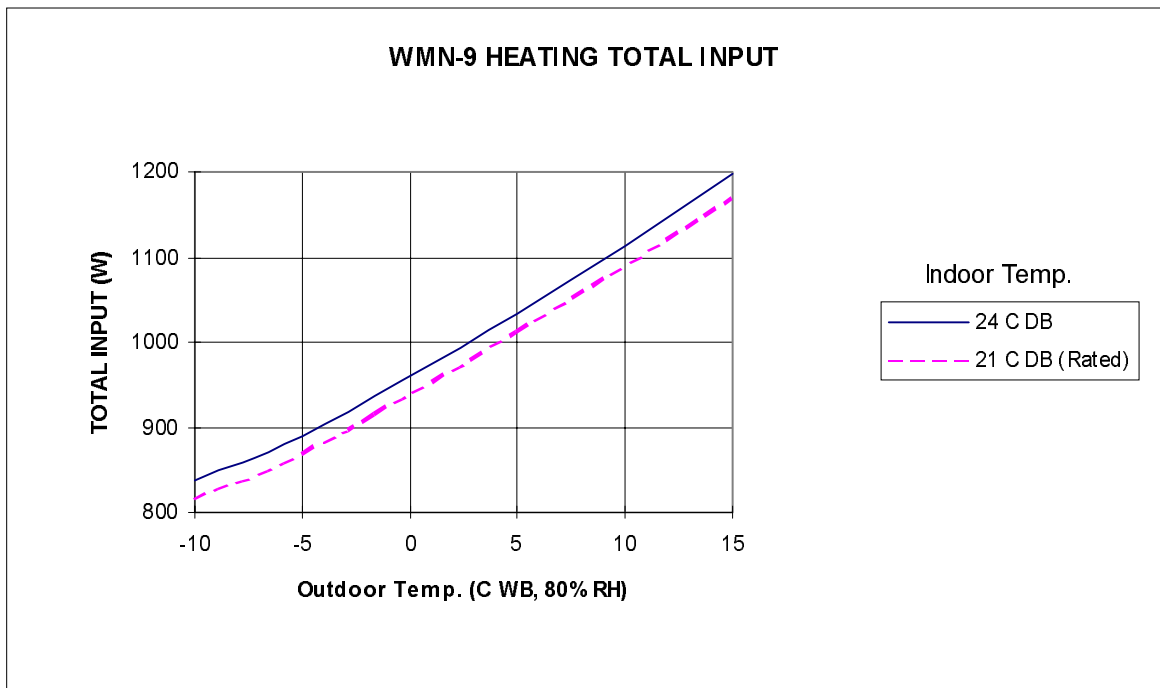
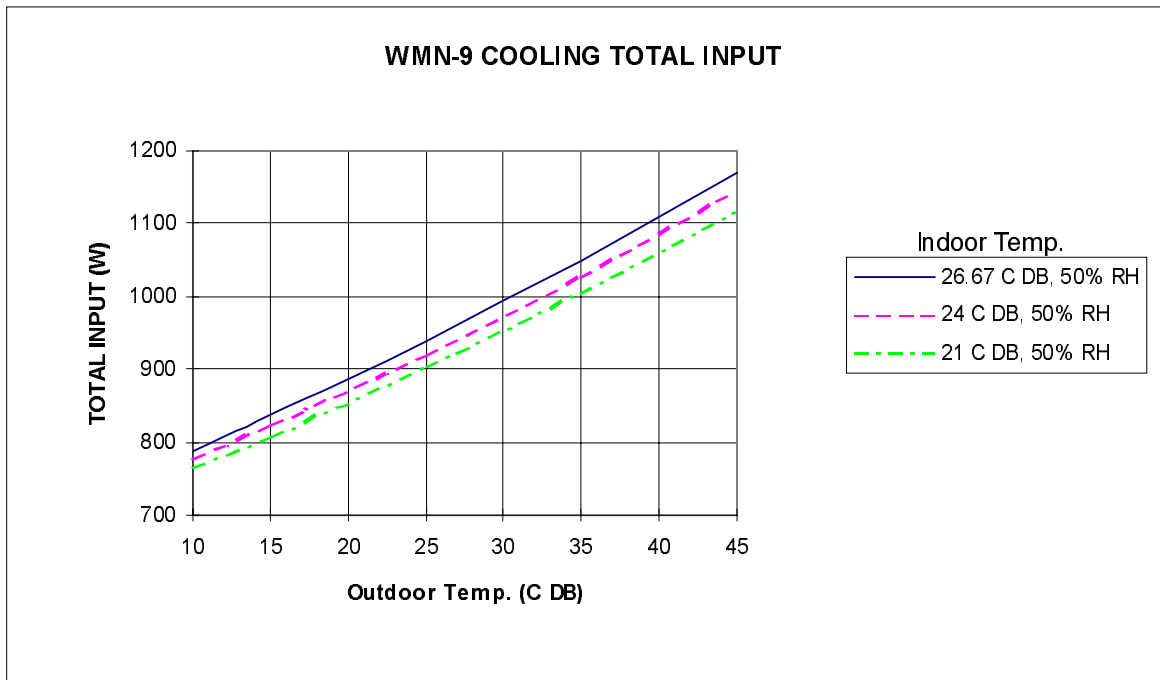


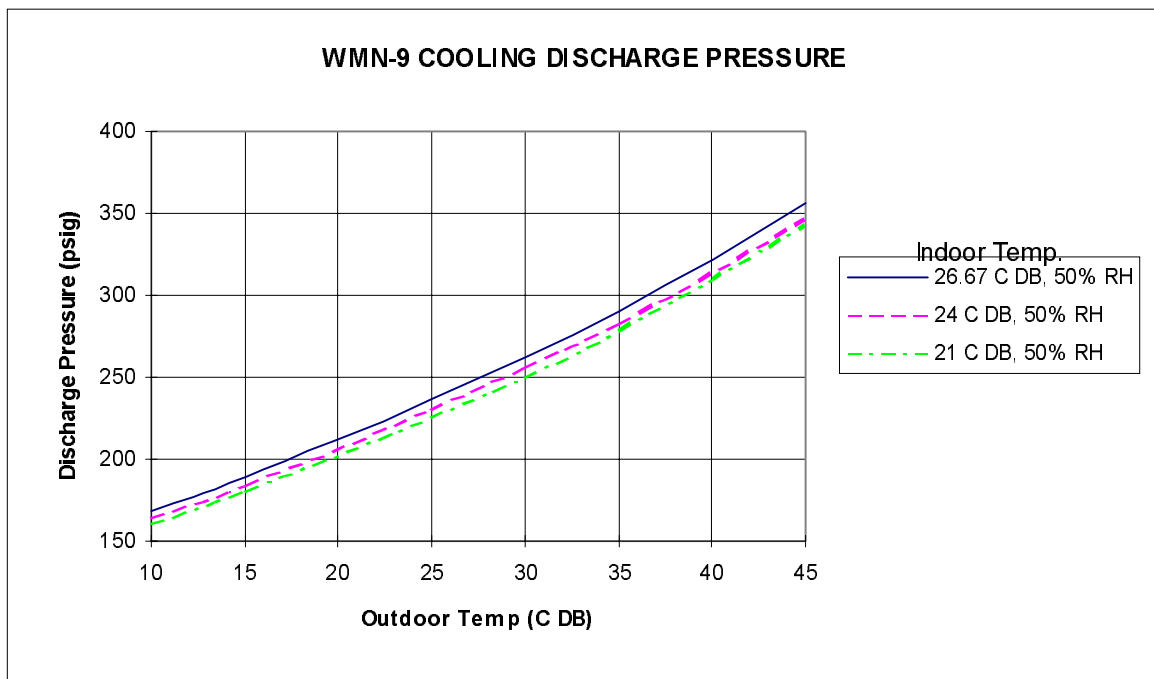
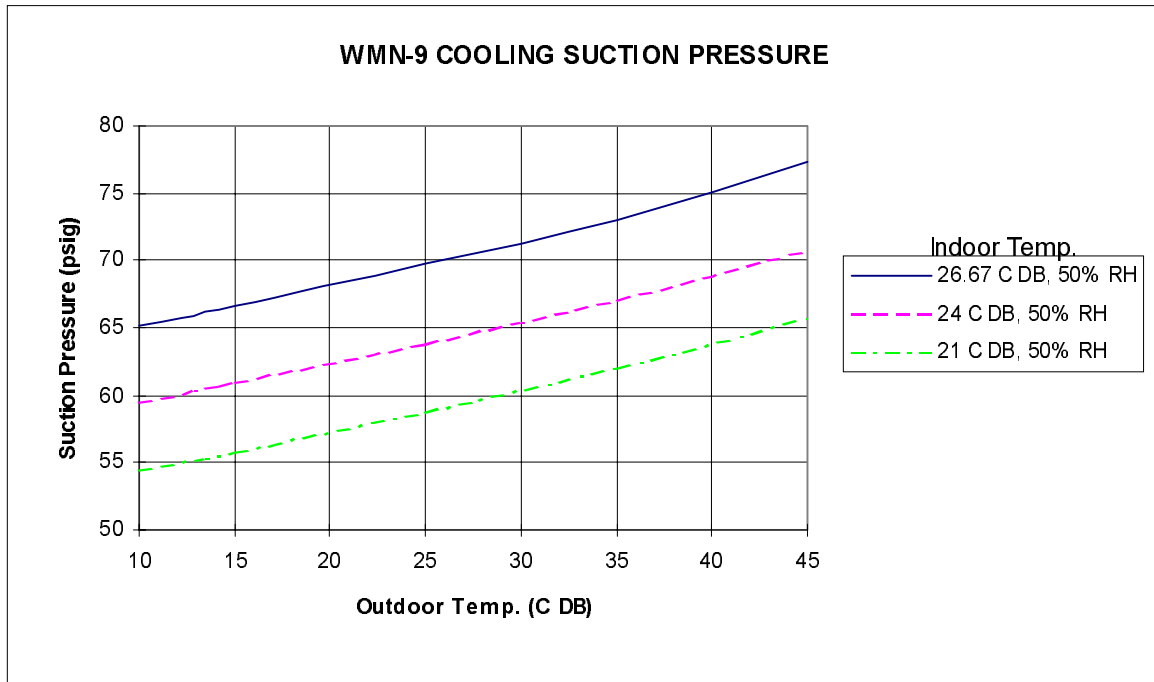


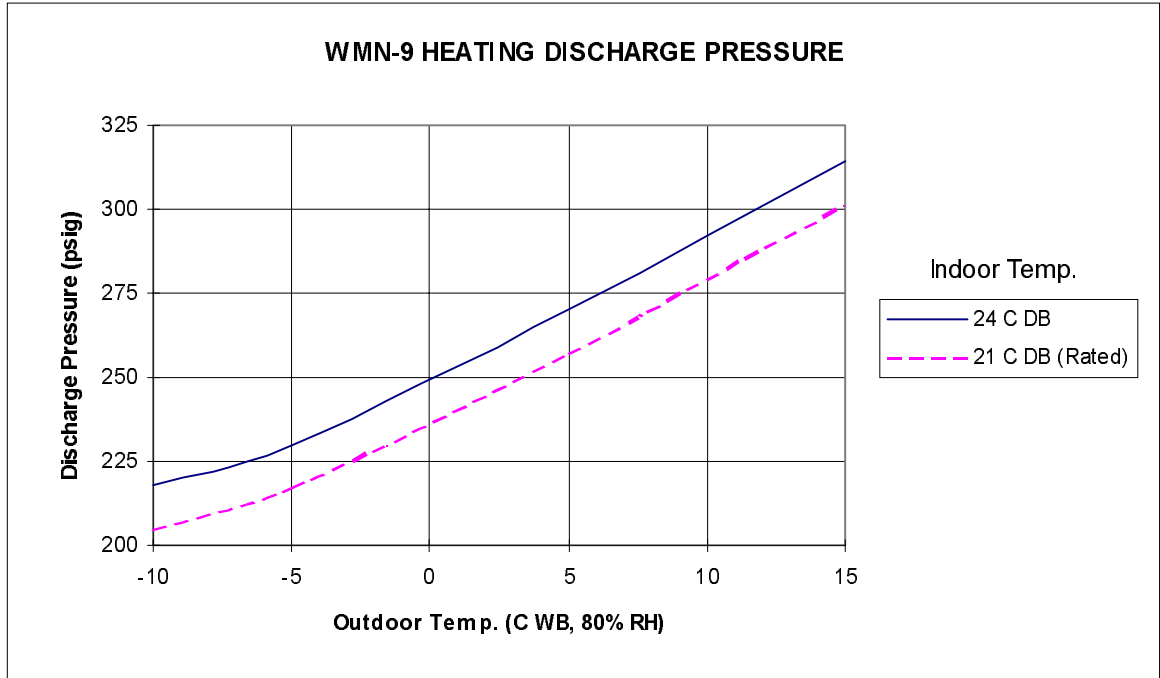
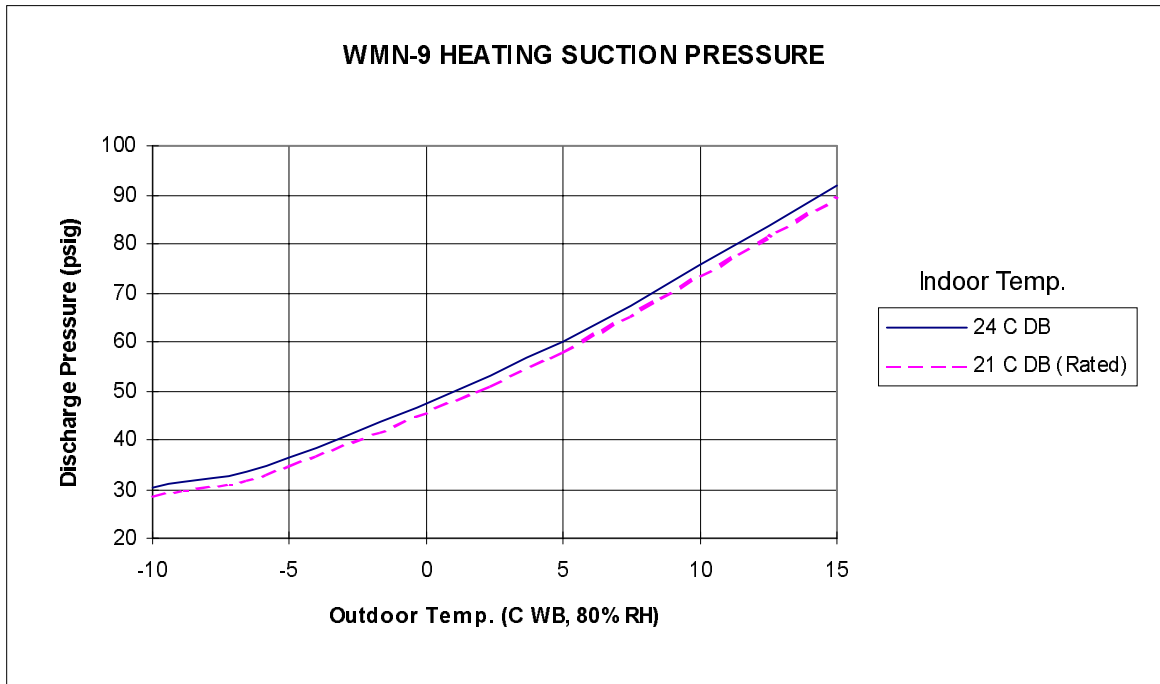


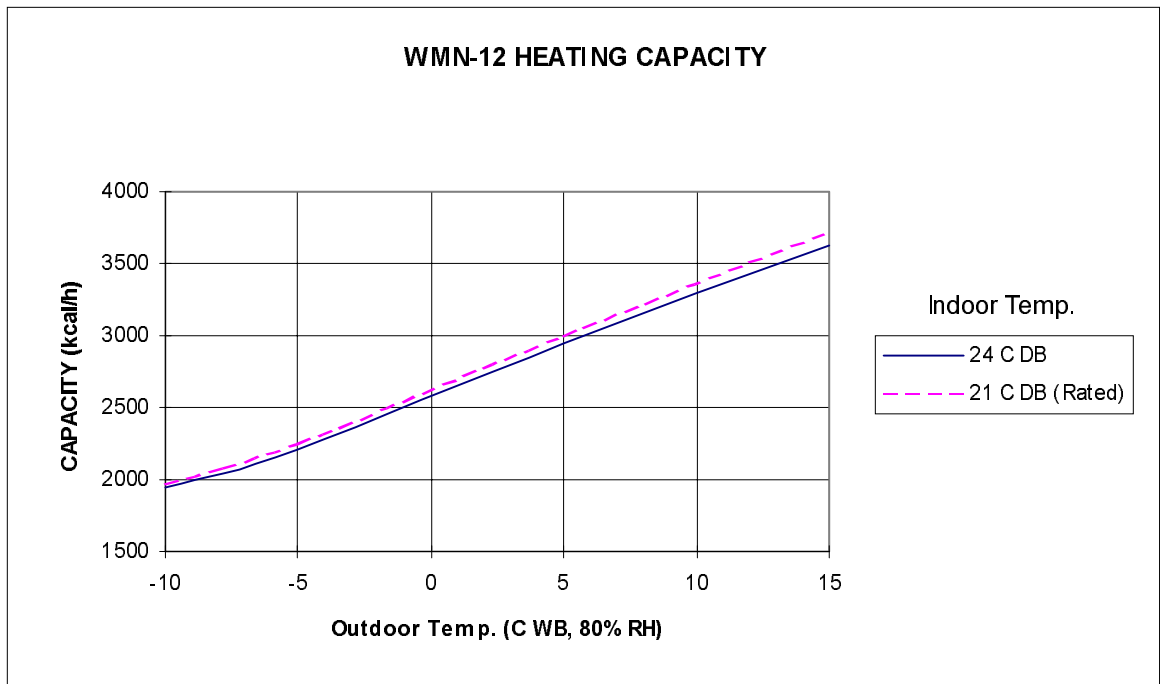
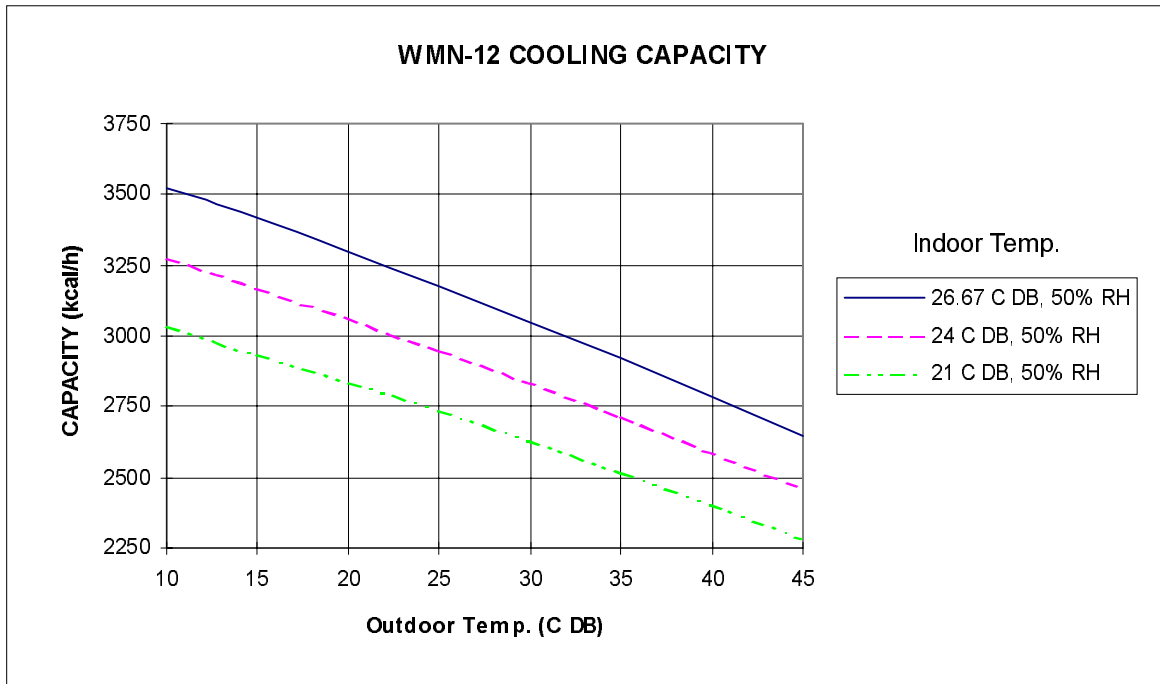


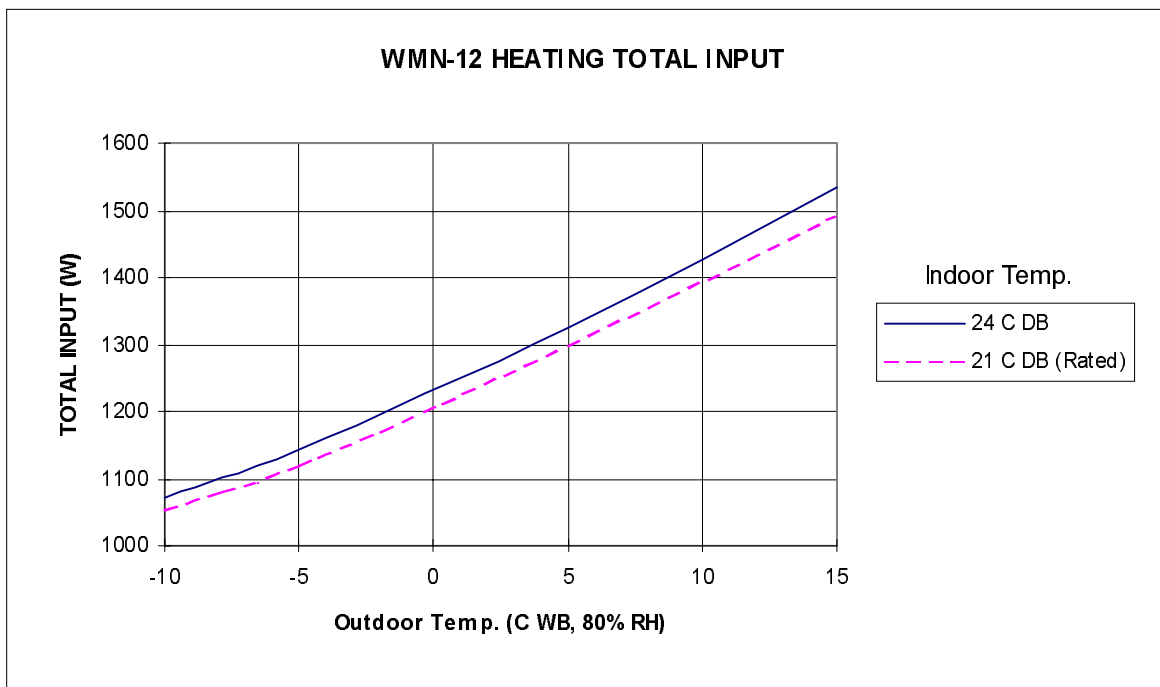
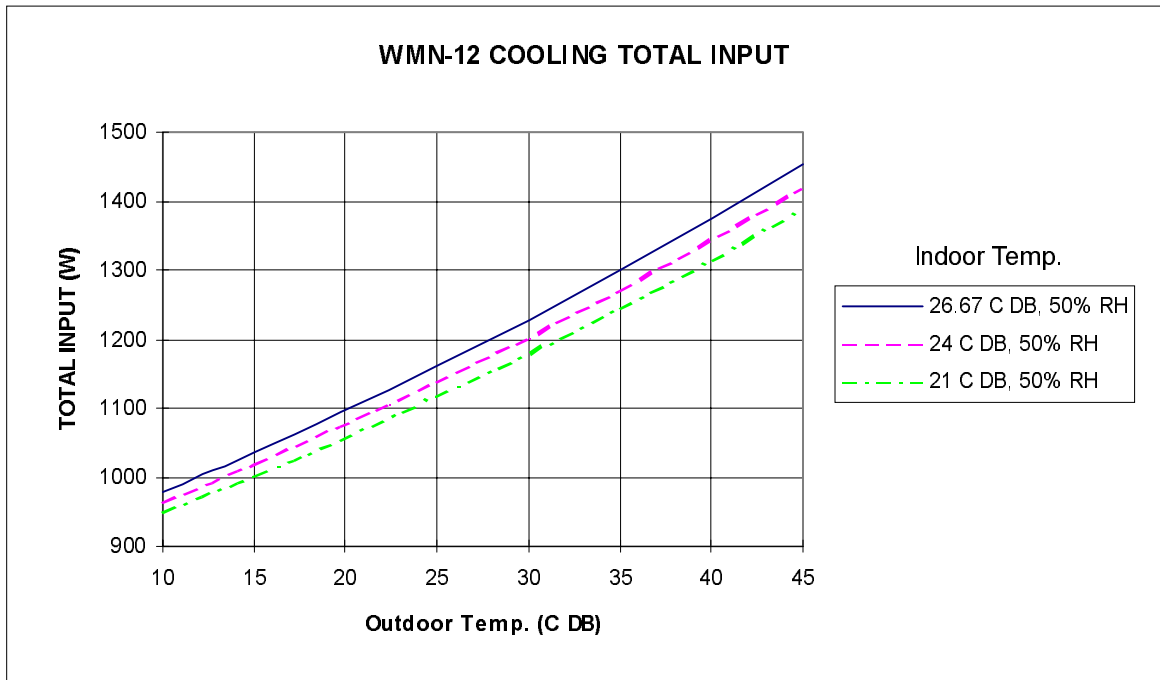


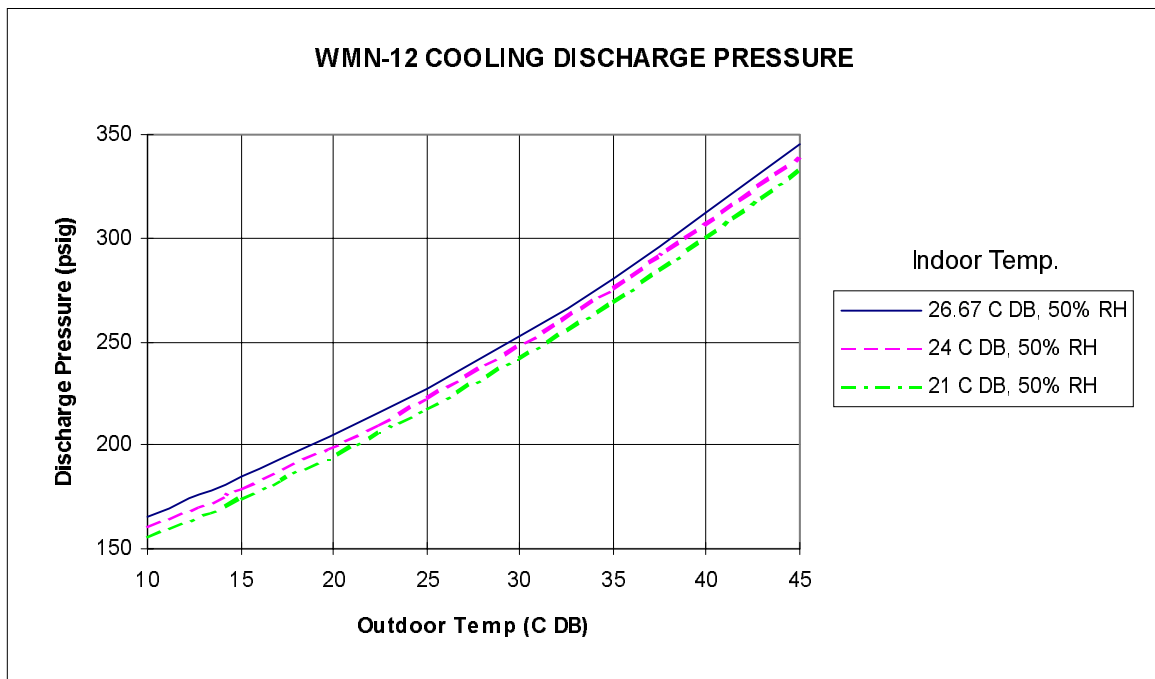
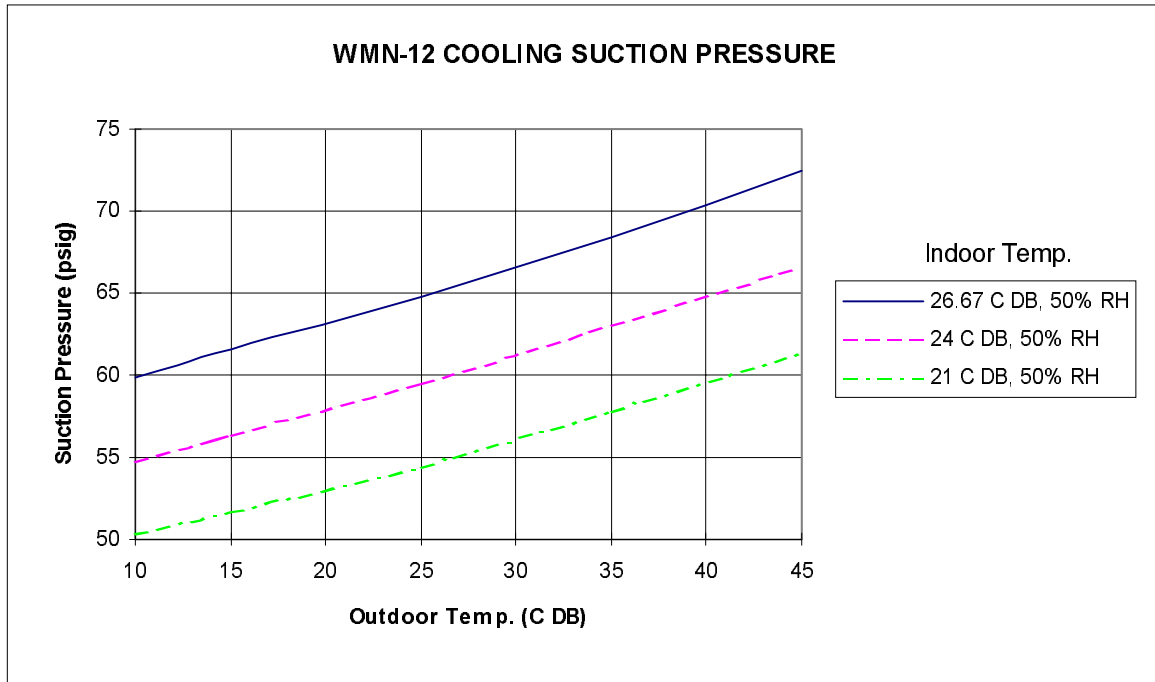


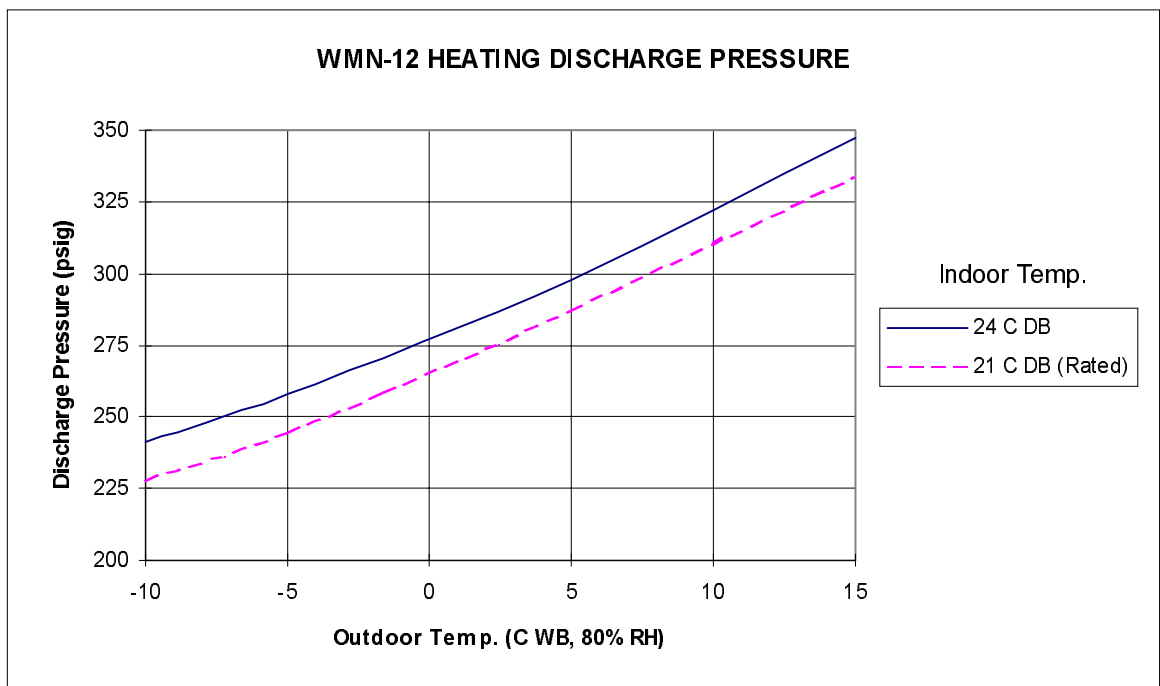
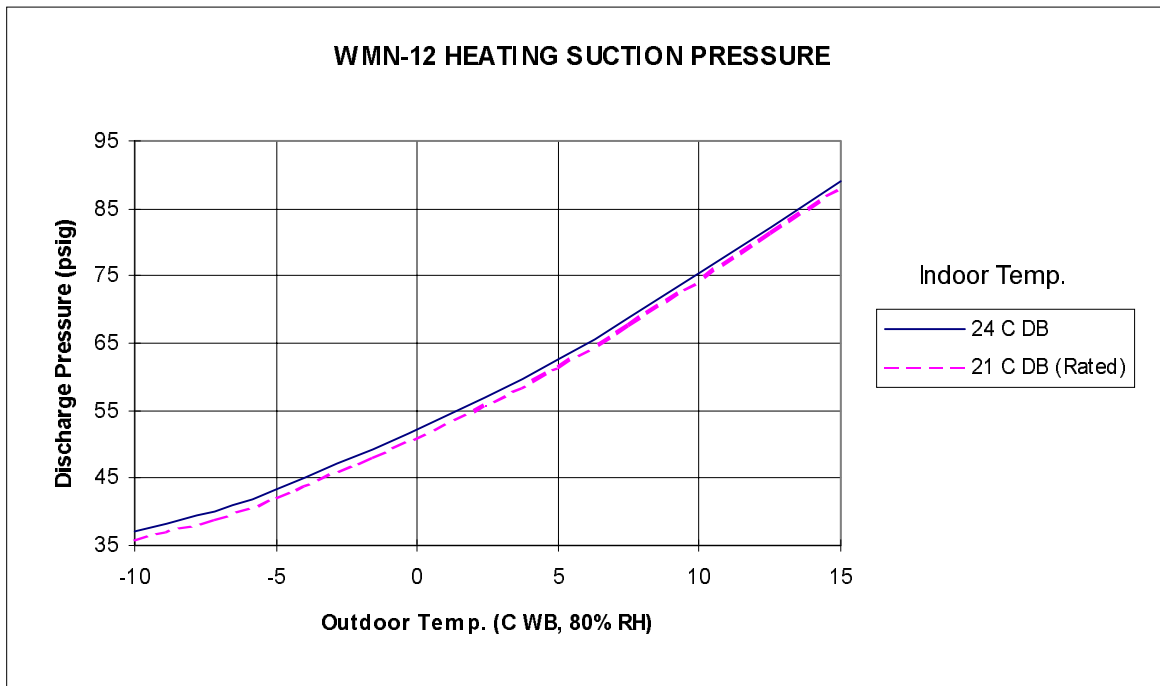


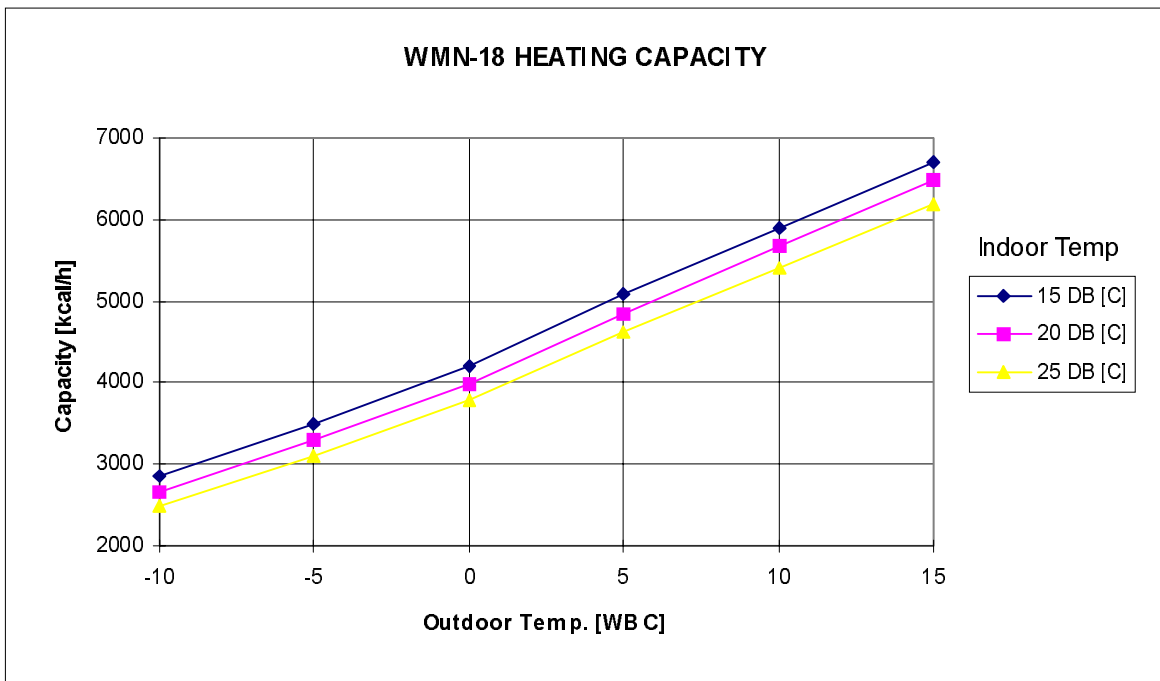
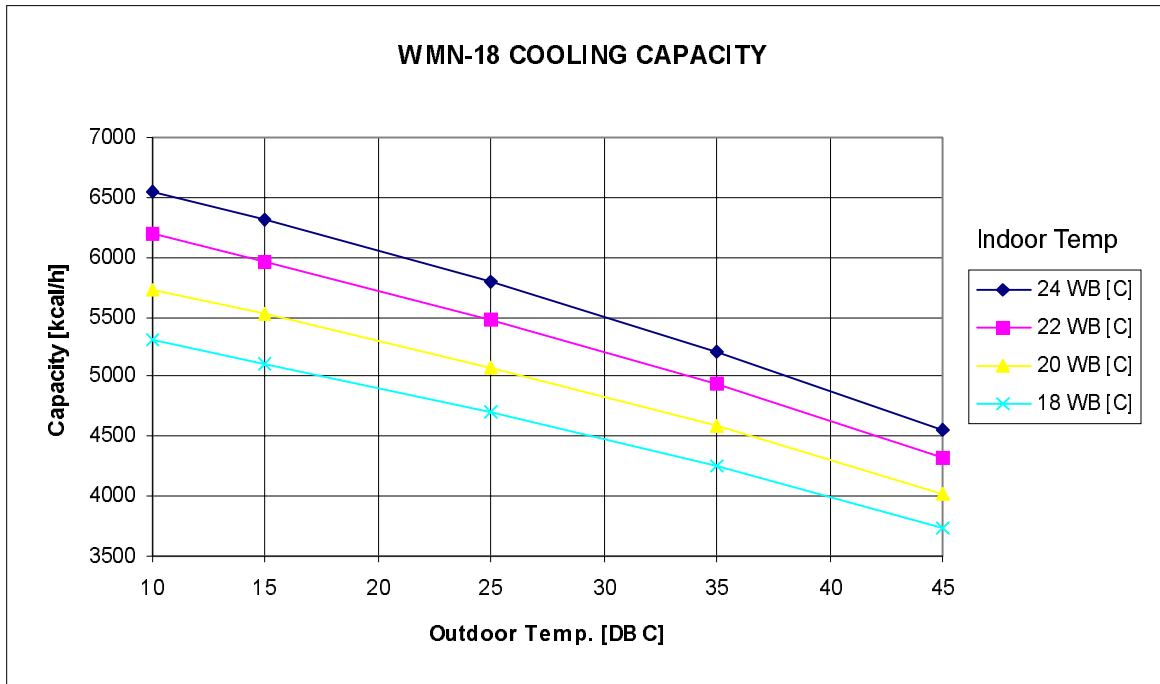


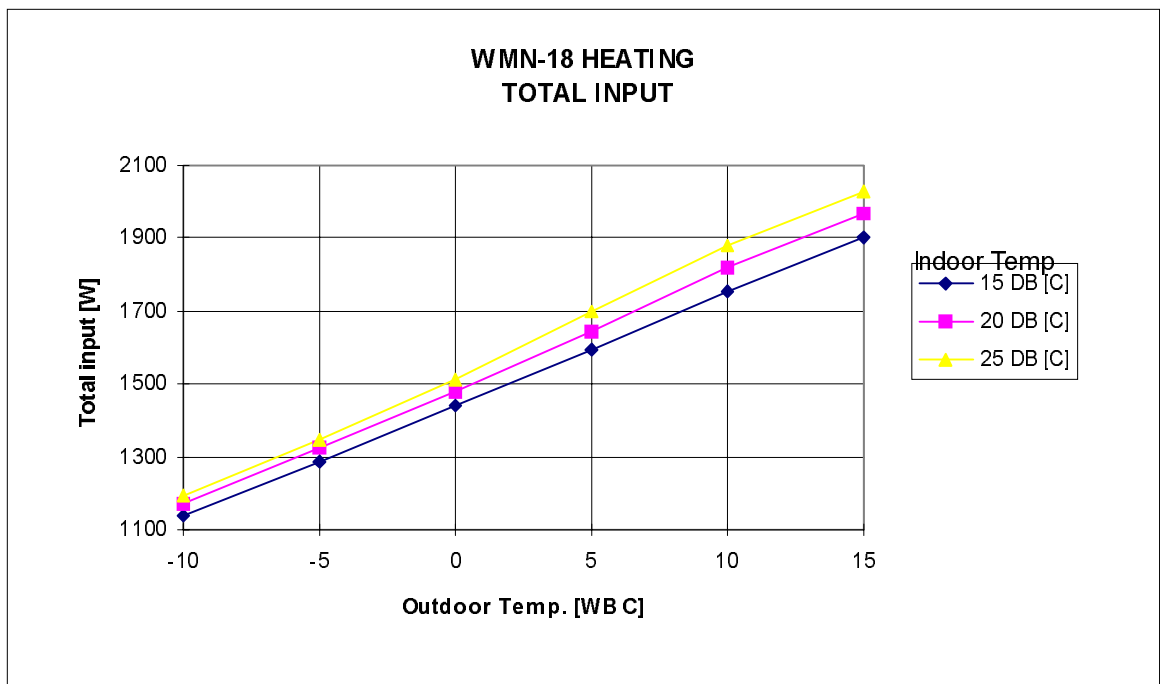
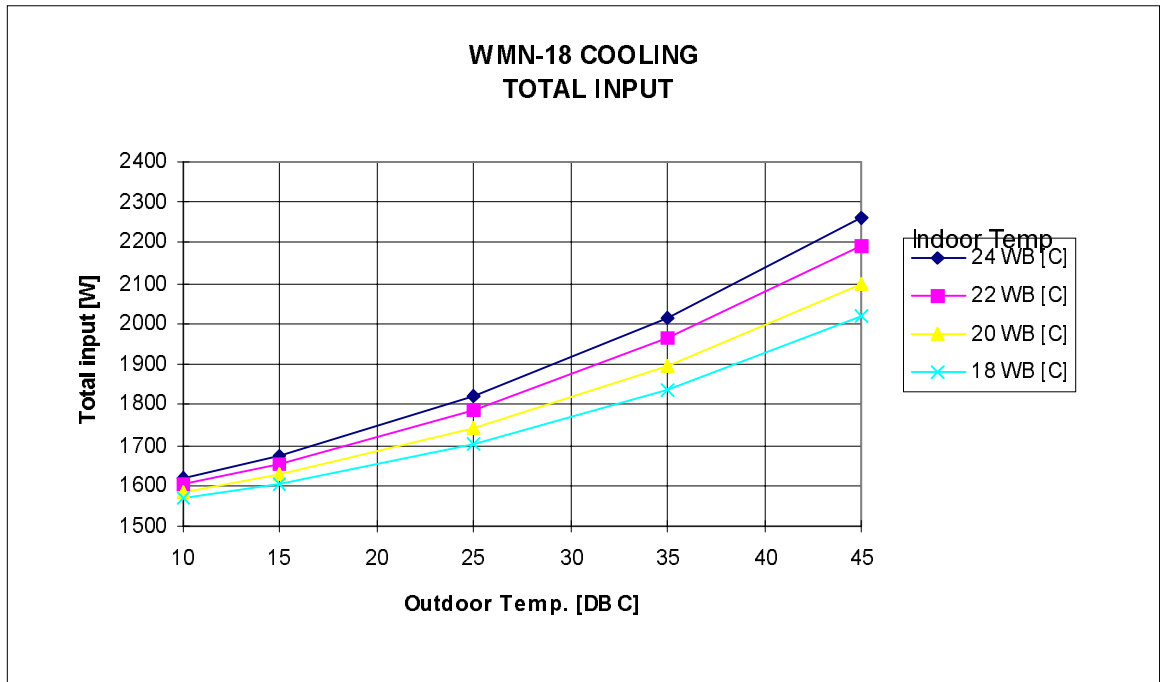


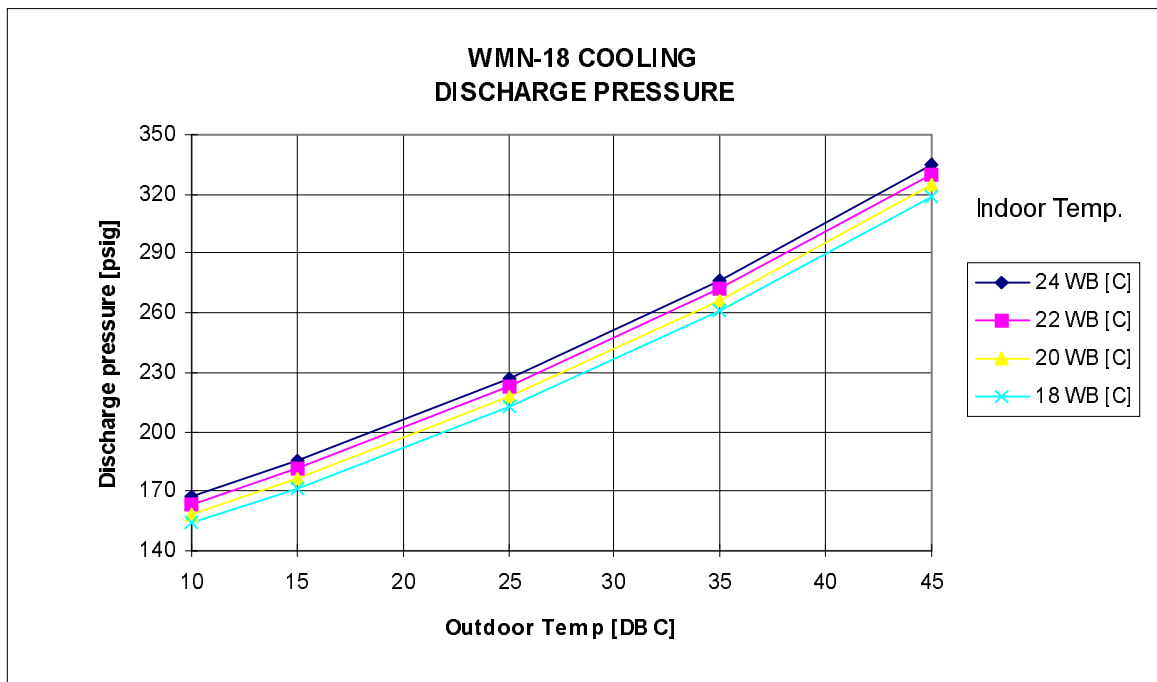
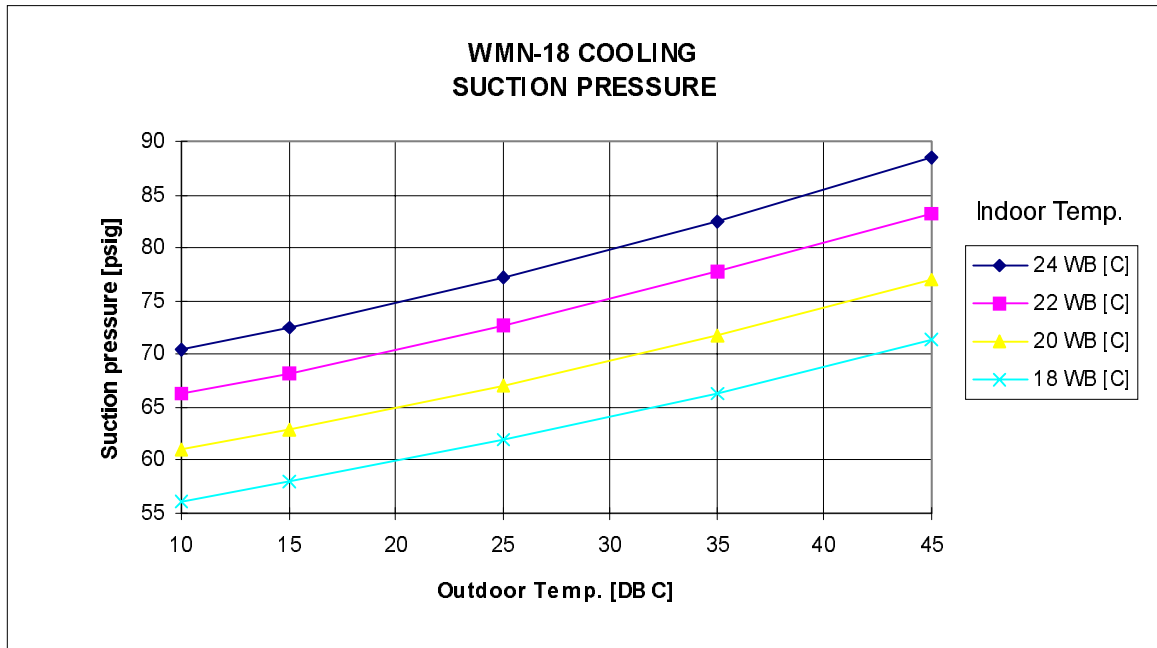


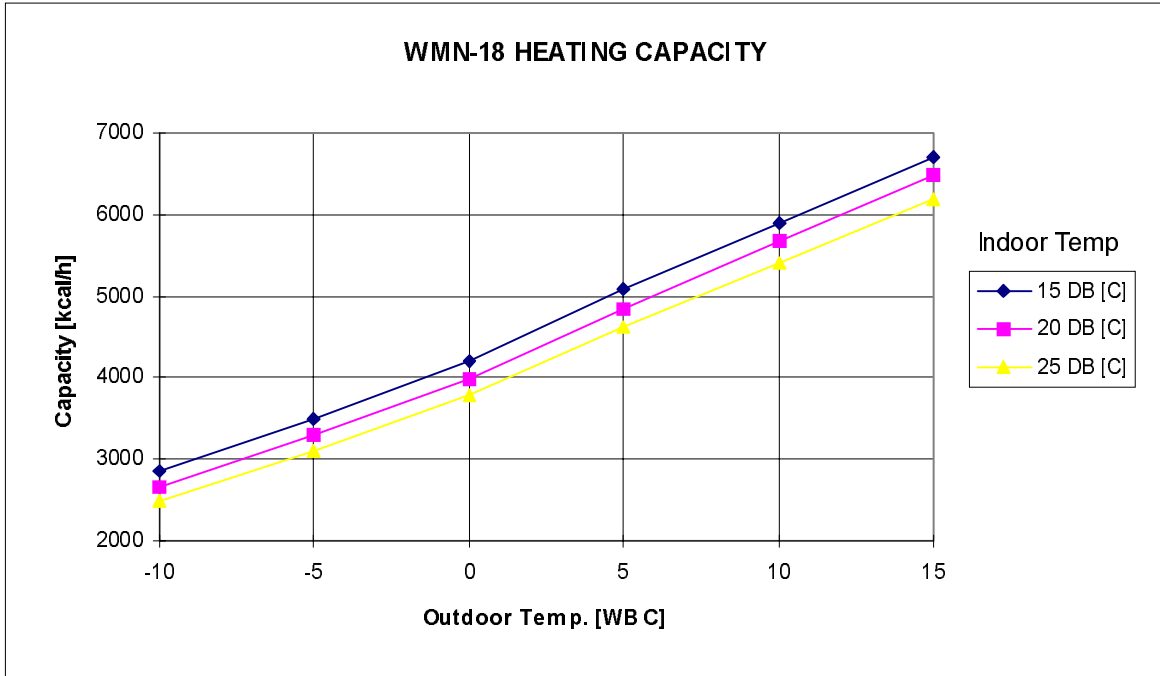
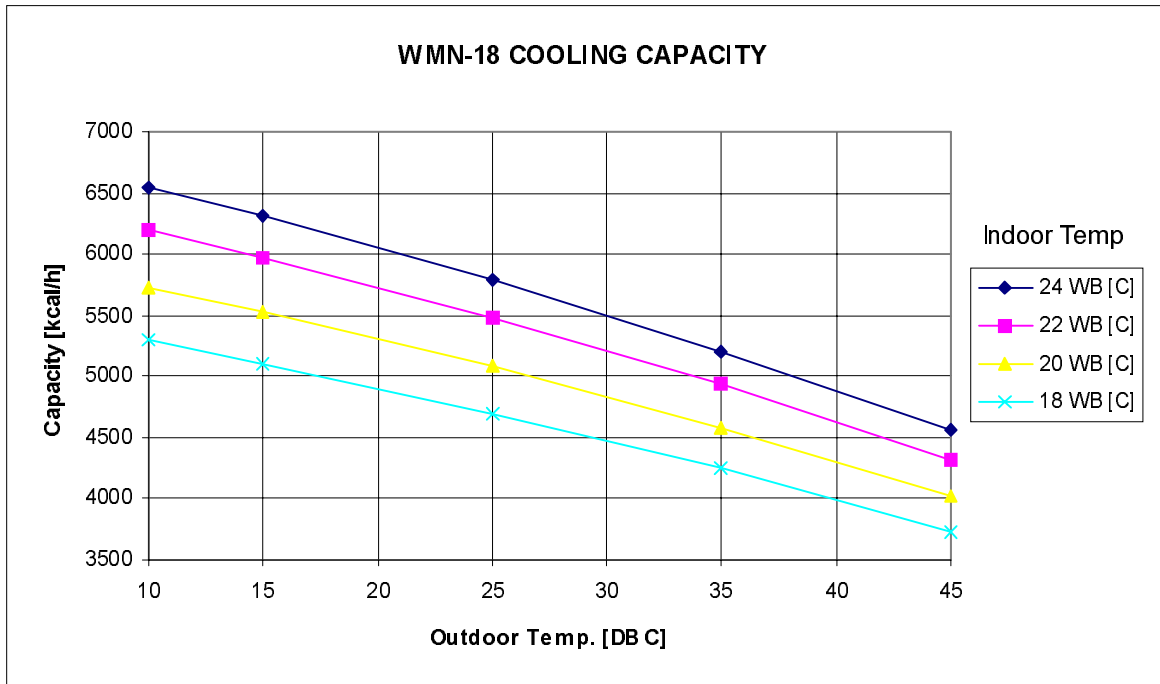


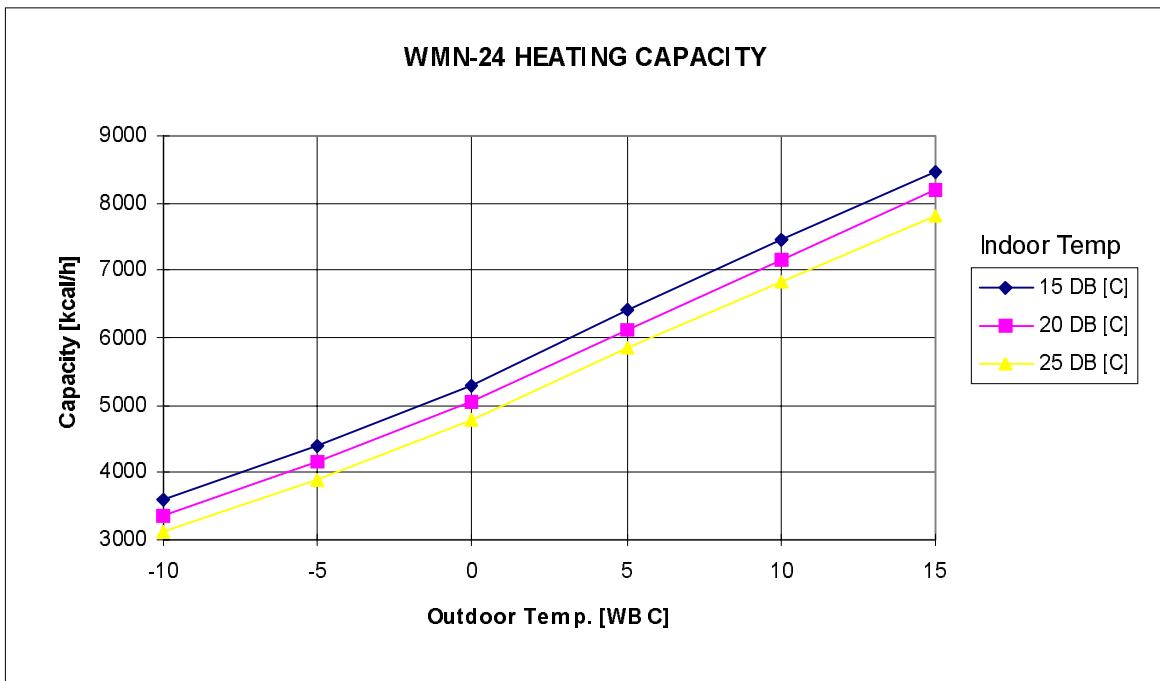
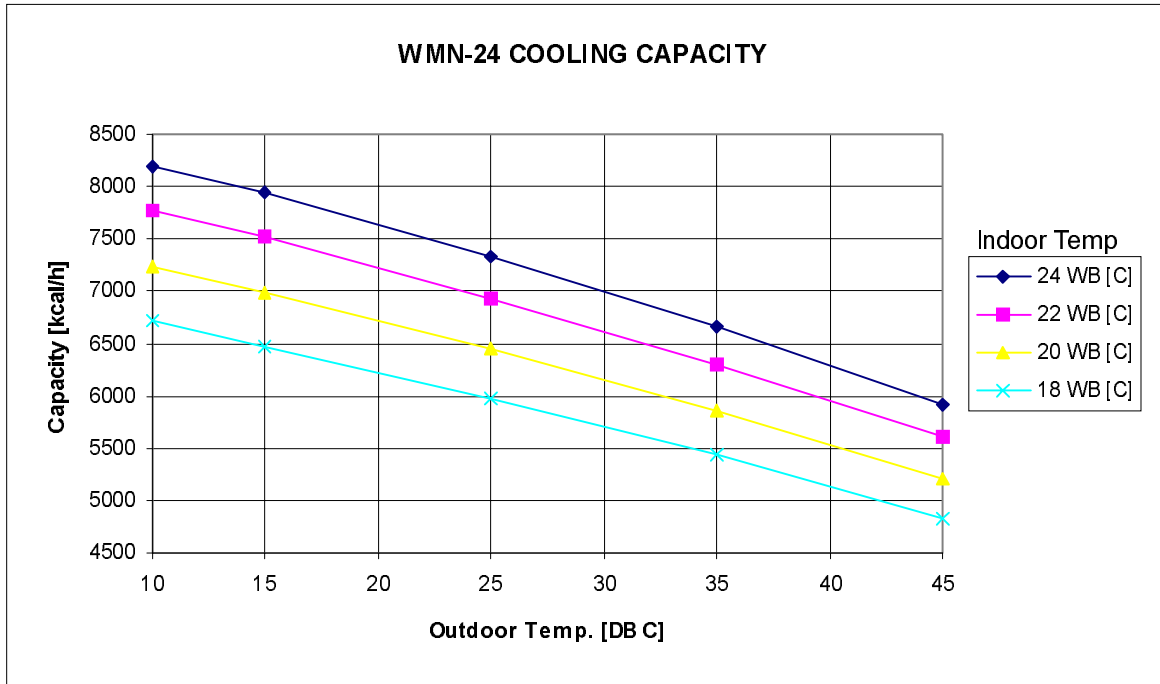


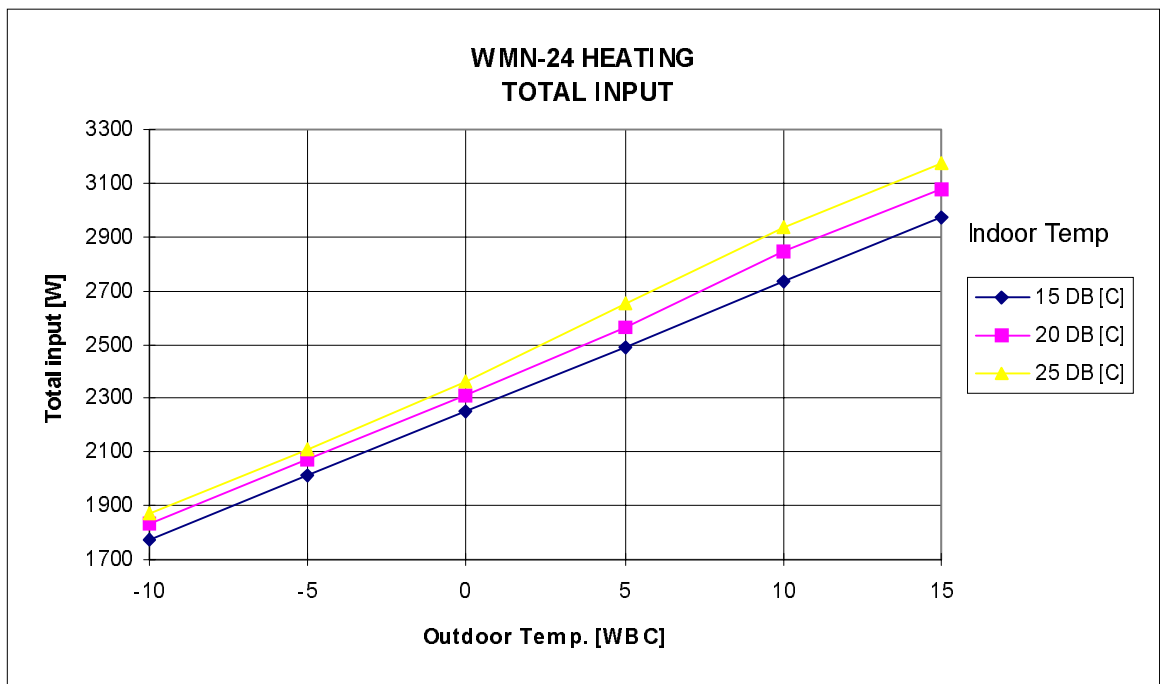
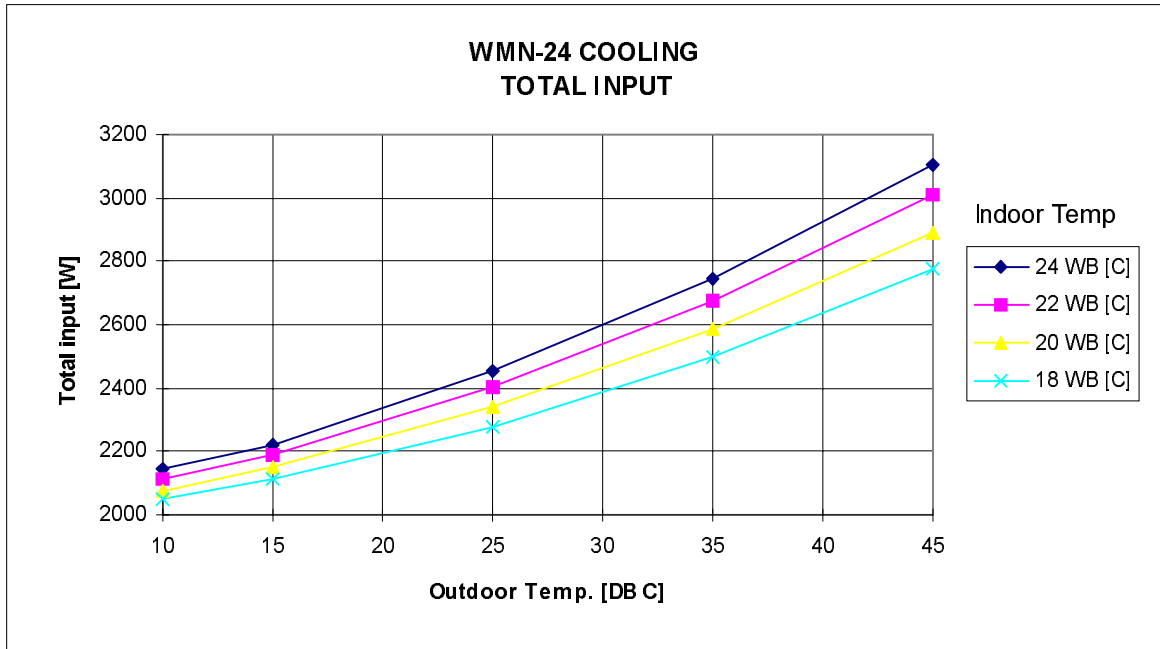


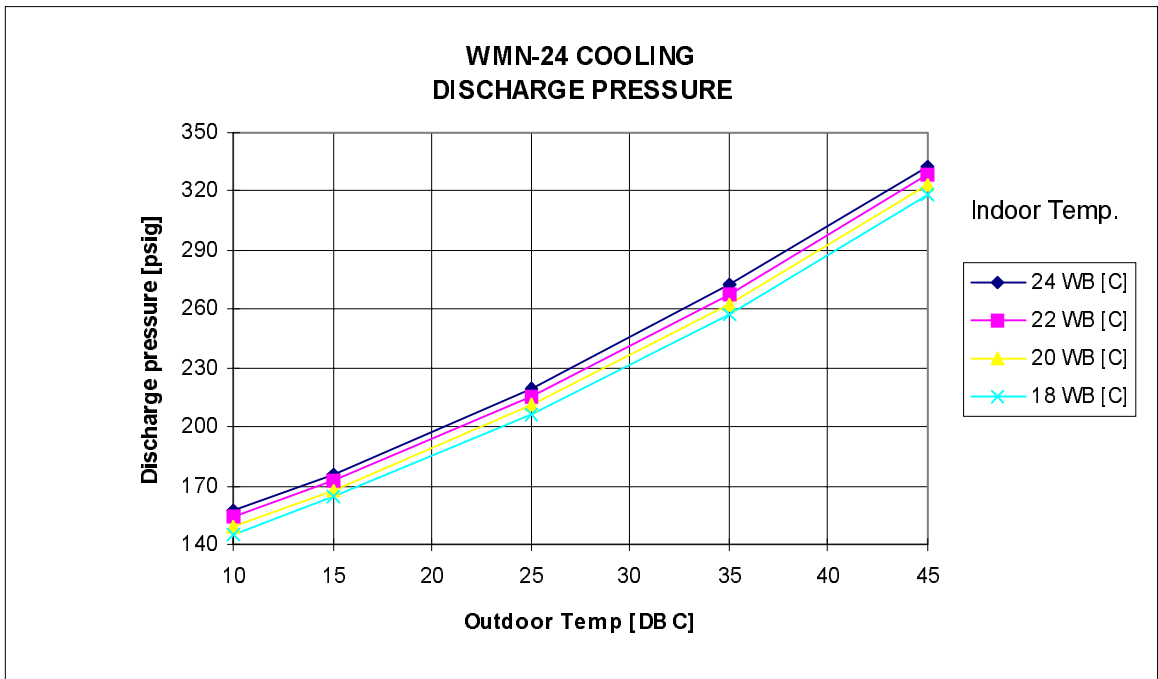
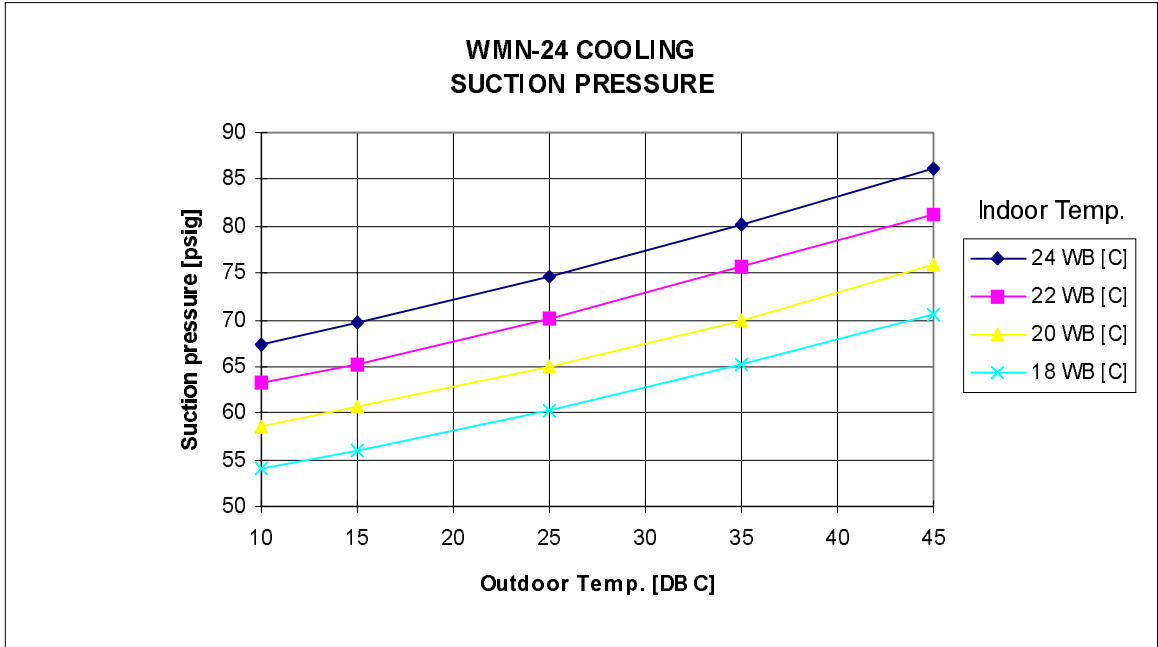


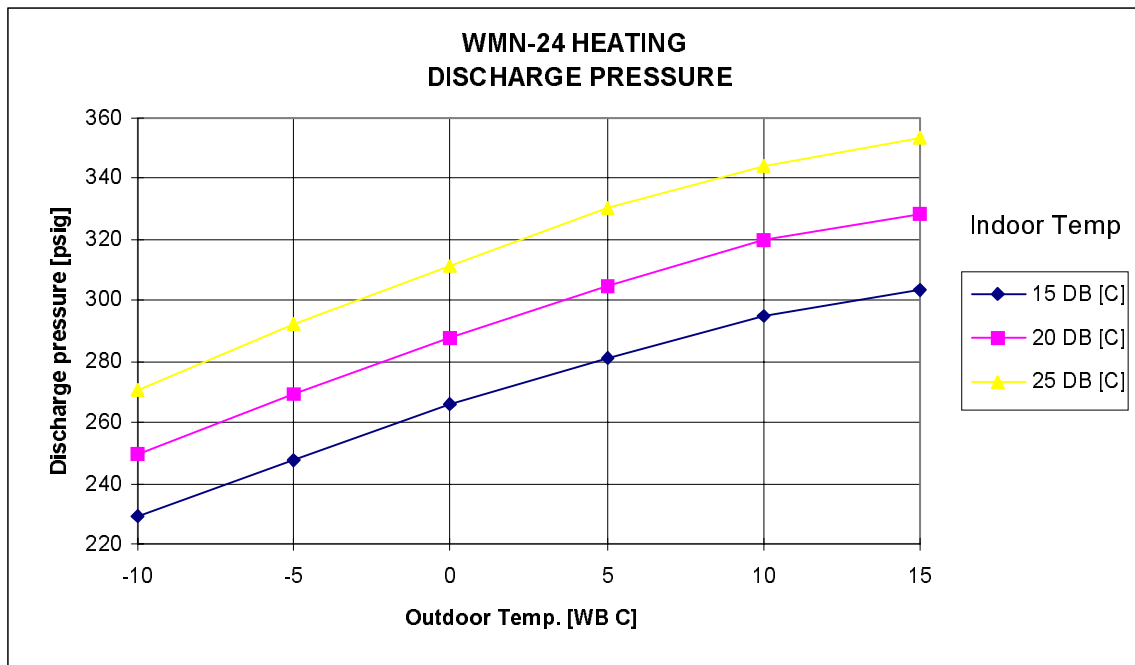
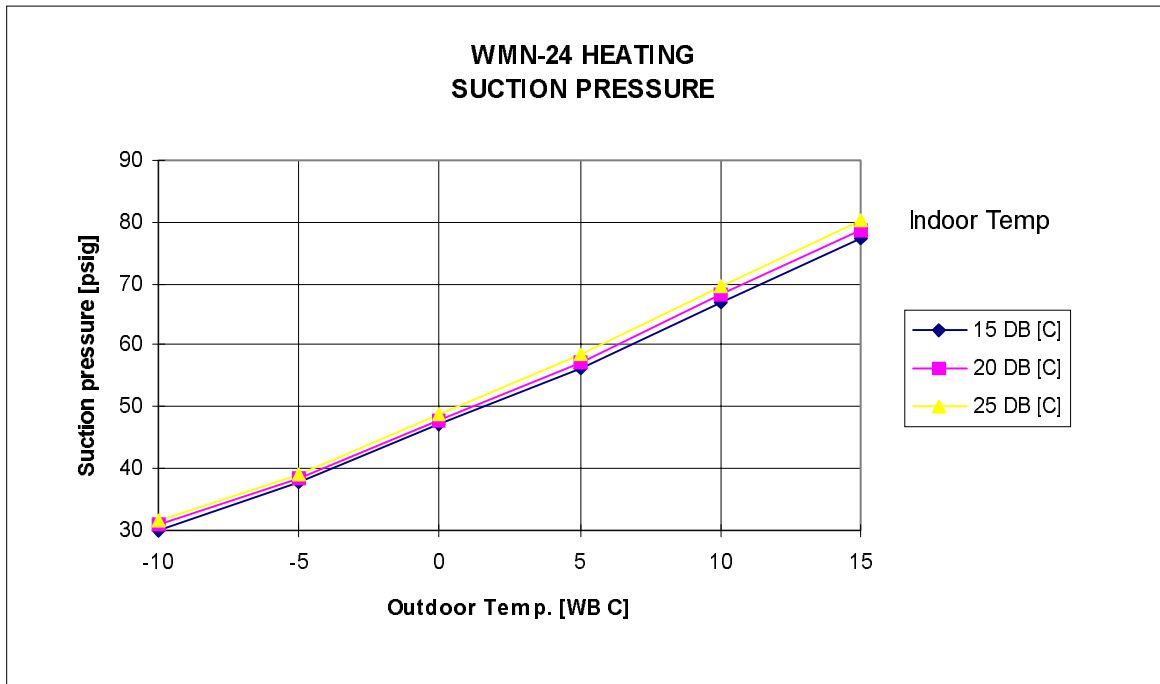




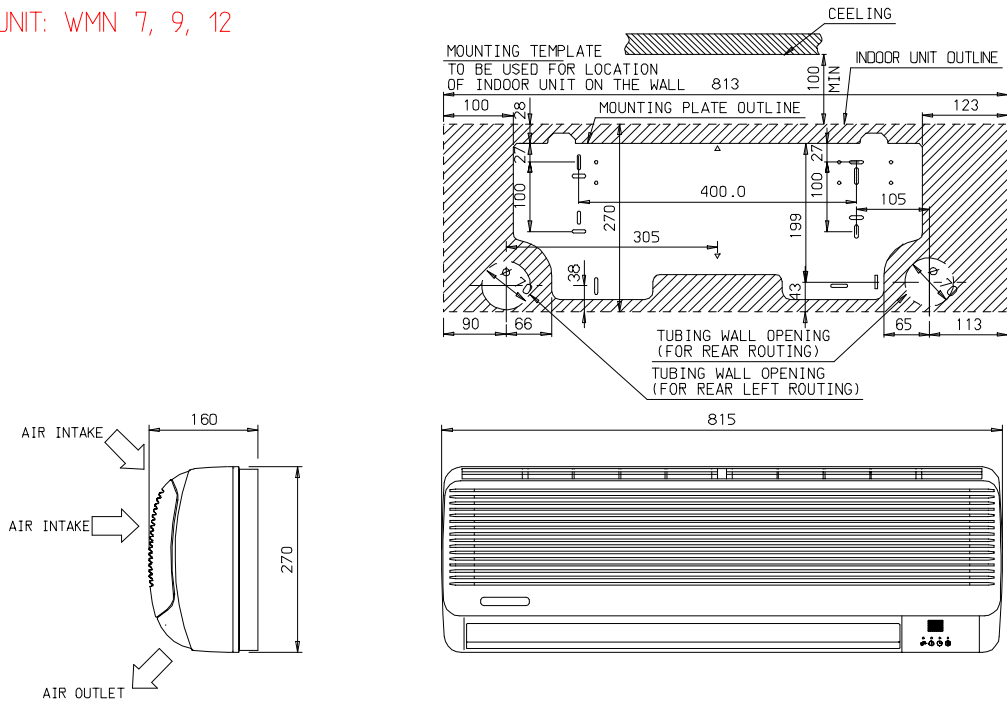




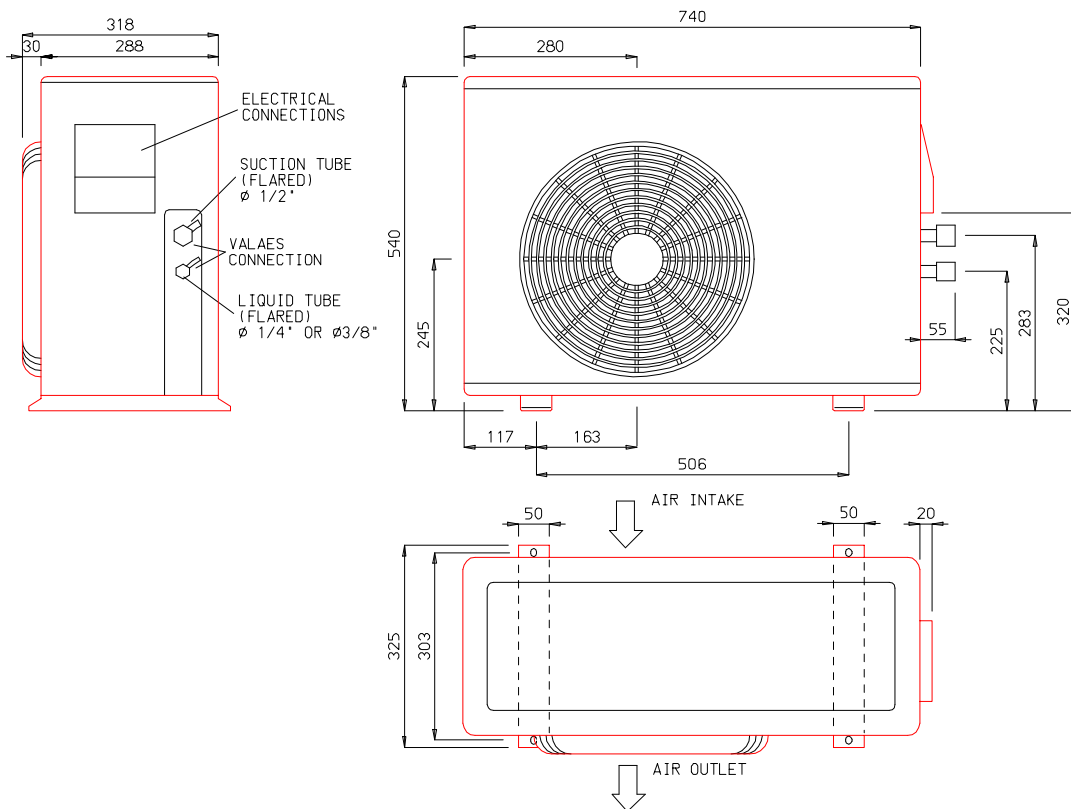




INDOOR UNIT: WMN 7, 9, 12

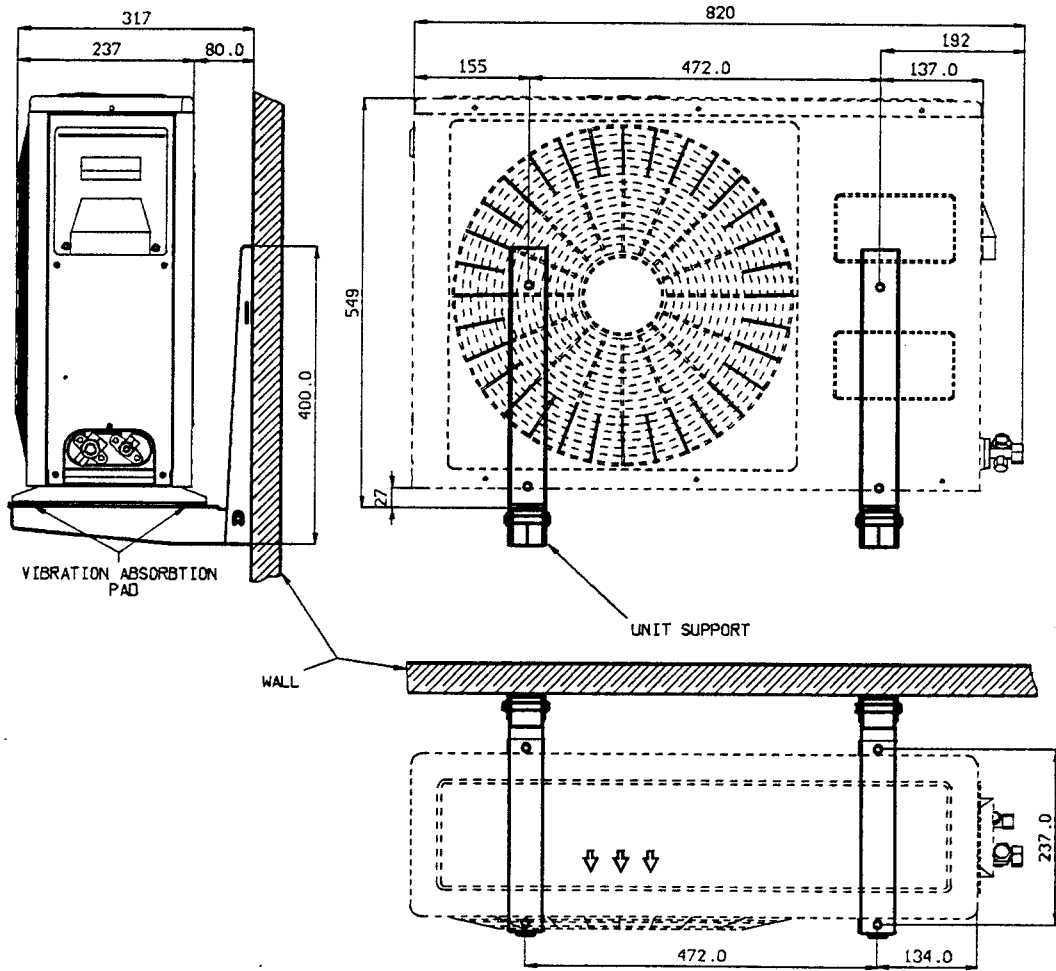


OUTDOOR UNIT



dd/wmn-4/instruction/out-d2

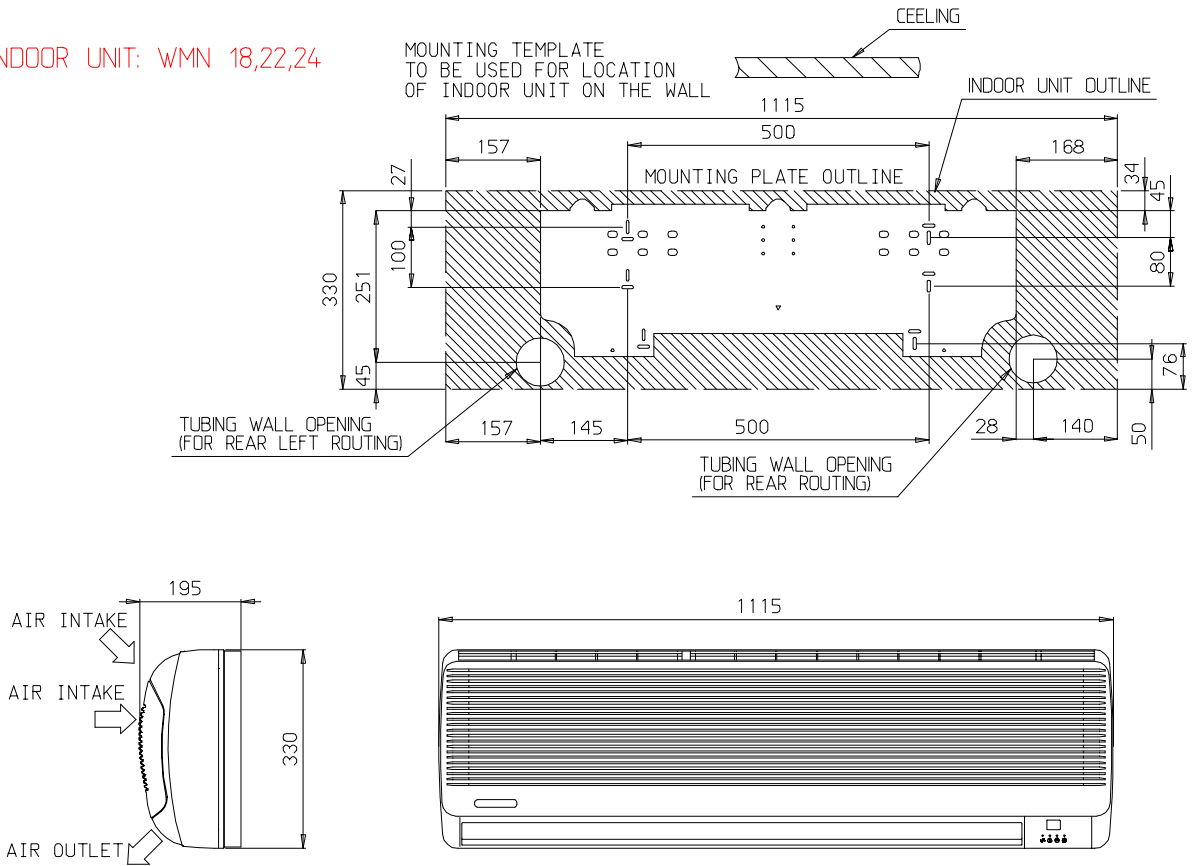
OUTDOOR UNIT SUPPORT



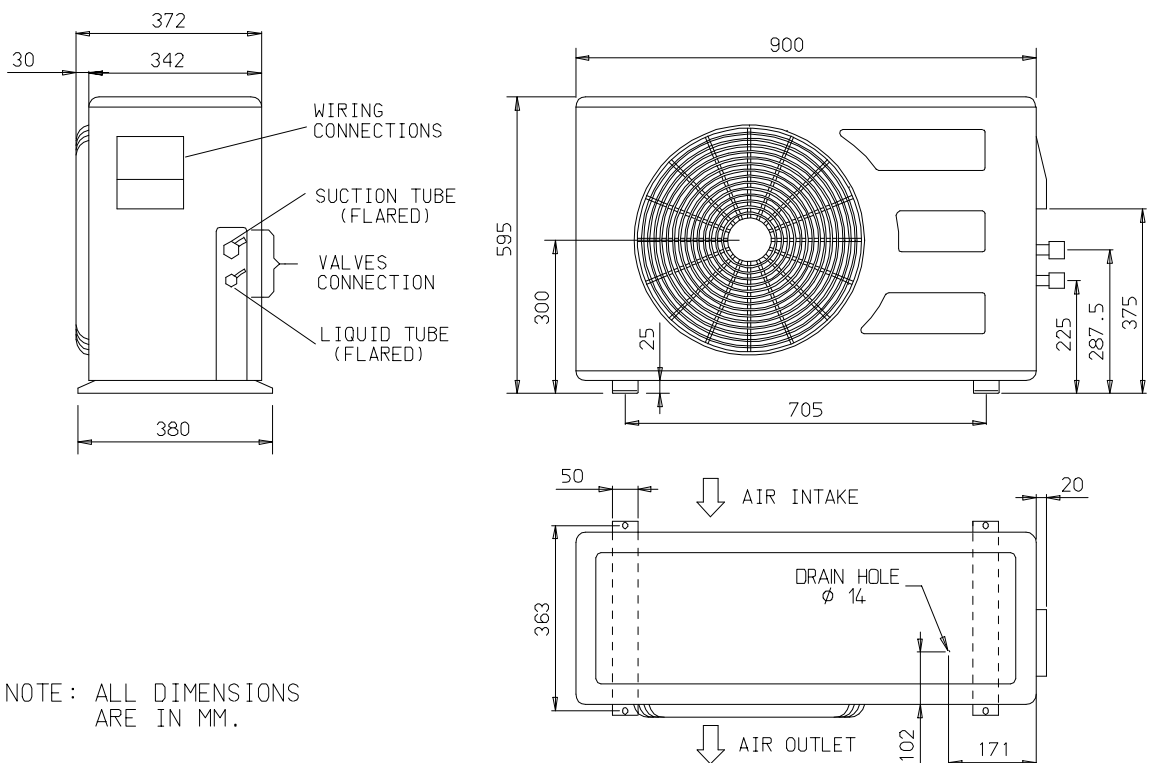
01/98

01/98-4/INSTRUCTION-418

INDOOR UNIT: WMN 18,22,24



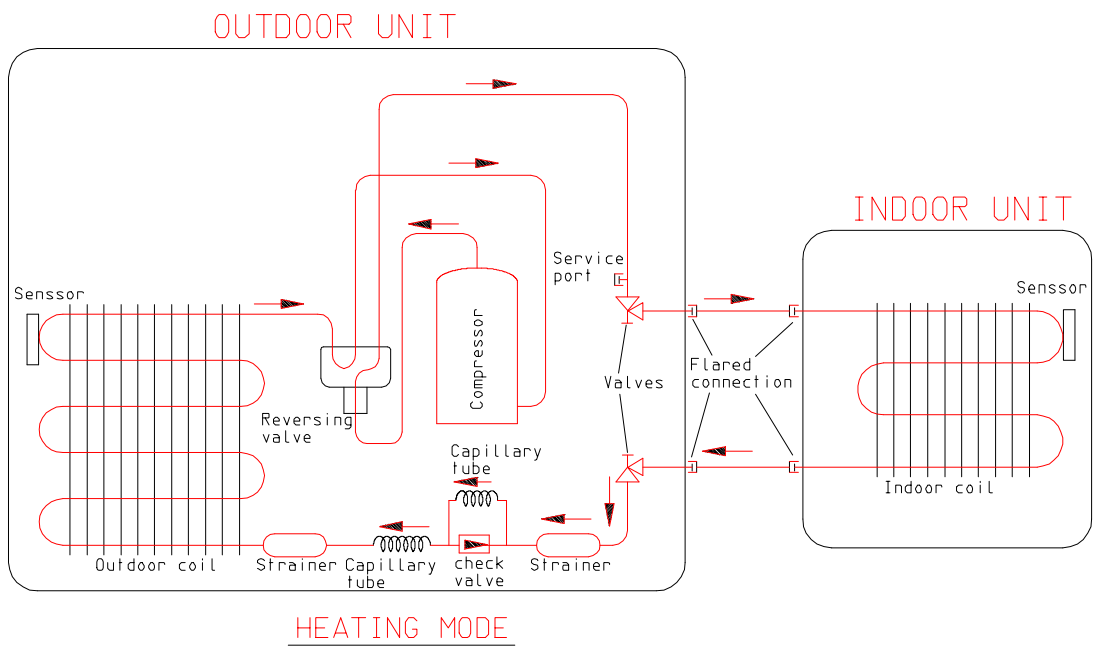
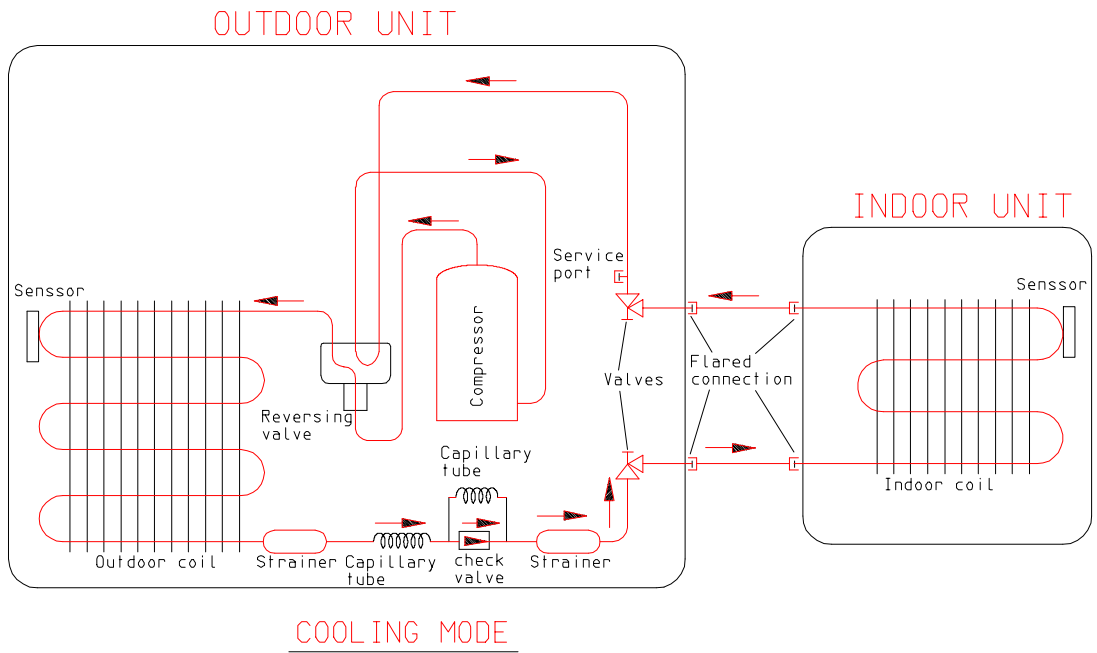
OUTDOOR UNIT



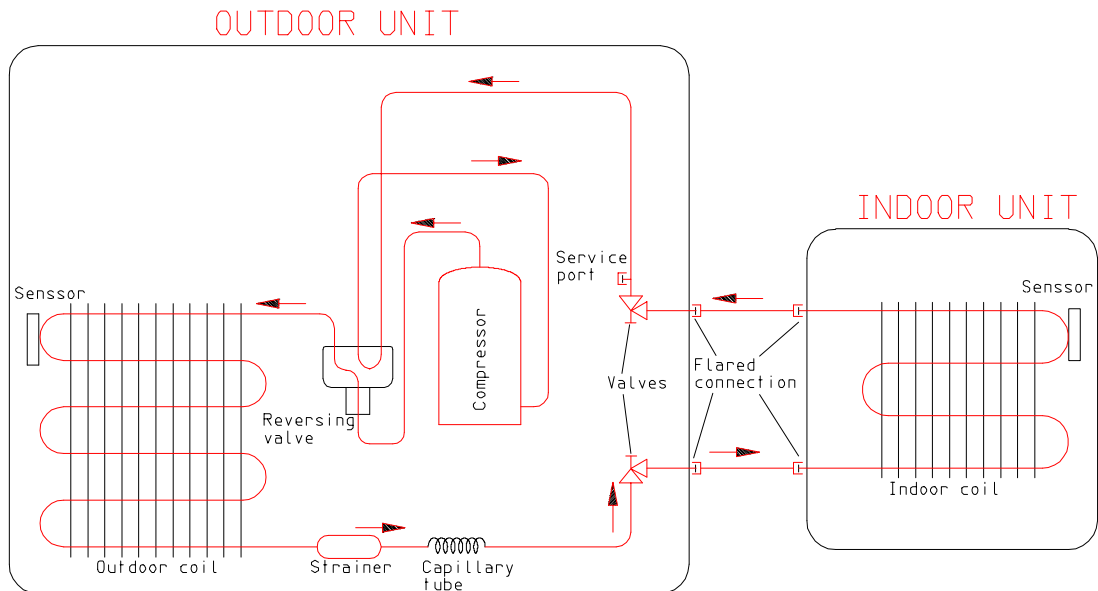
NOTE: ALL DIMENSIONS ARE IN MM.

aa/wmn-22_4/instruction (out_d)

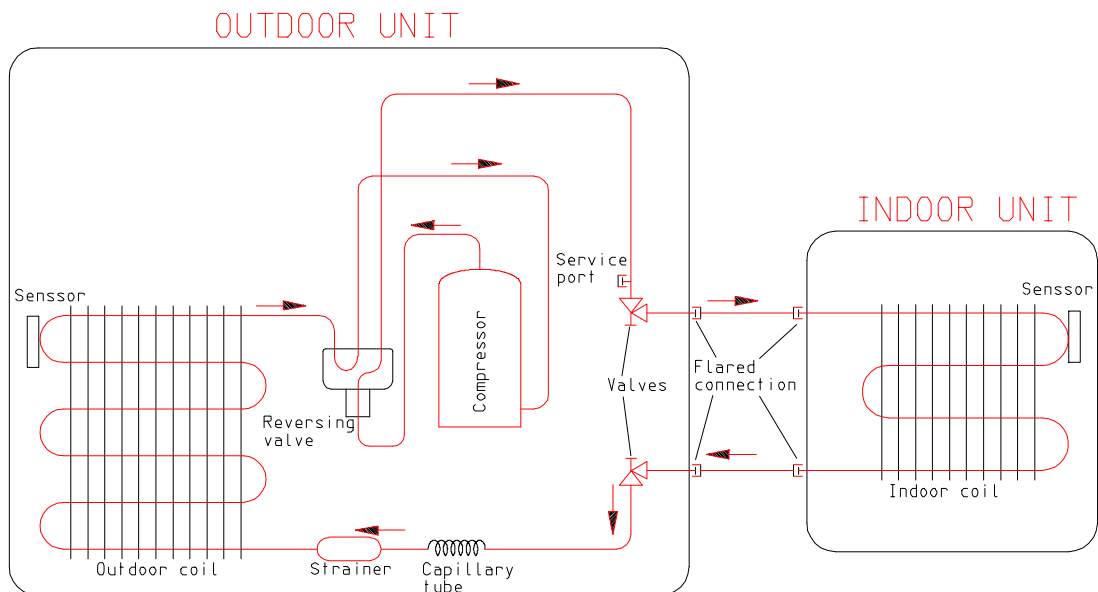
REFRIGERATION DIAGRAM
HEAT PUMP MODEL-WMN-6-7-12-14-16



REFRIGERATION DIAGRAM
HEAT PUMP MODELS WMN-9, 18, 24

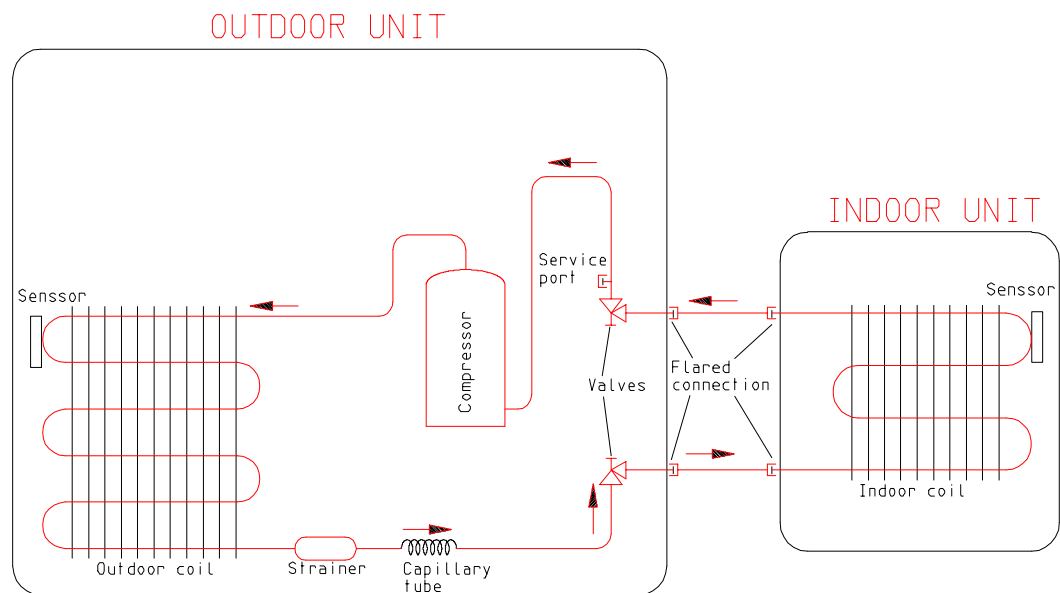


COOLING MODE



HEATING MODE

REFRIGERATION DIAGRAM
COOLING ONLY - ALL MODELS



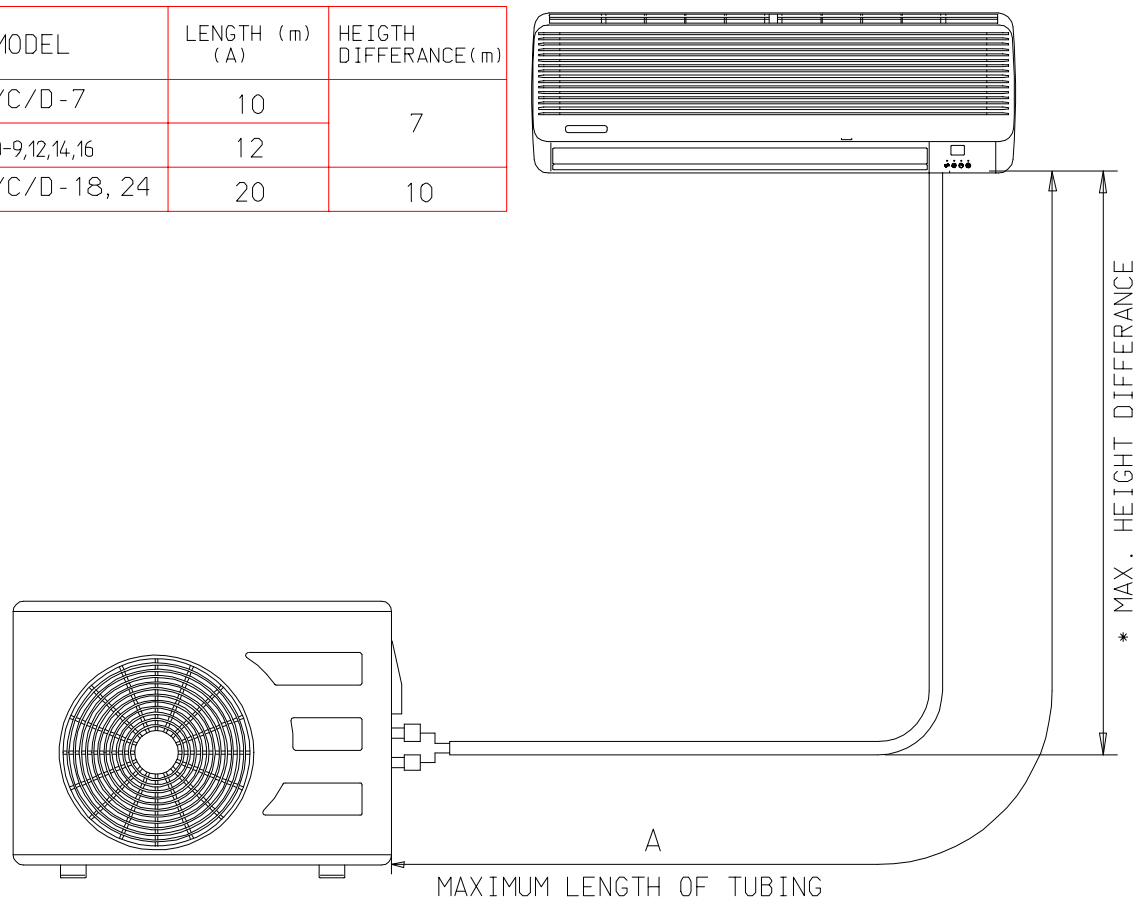
ADDITIONAL REFRIGERANT CHARGE (R-22 gr)

HEAT PUMP UNITS

MODEL	REFRIGERANT TUBING LENGTH (ONE WAY)					
	6M	8M	10M	12M	16M	20M
WMN/A/C/D-7	—	30	60	—	—	—
WMN/A/C/D-9,12,14,16	—	30	60	100	—	—
WMN/A/C/D-18, 24	—	80	160	240	320	450

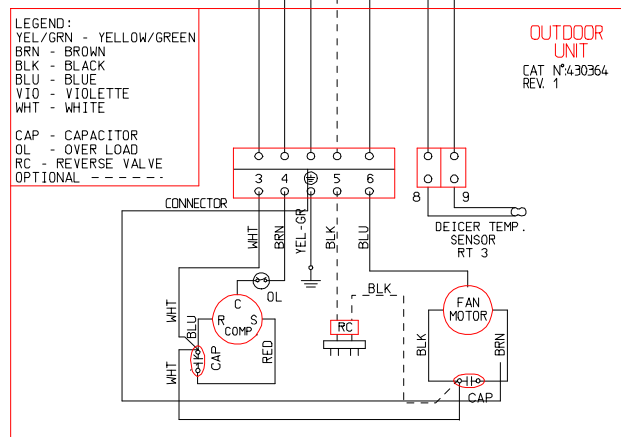
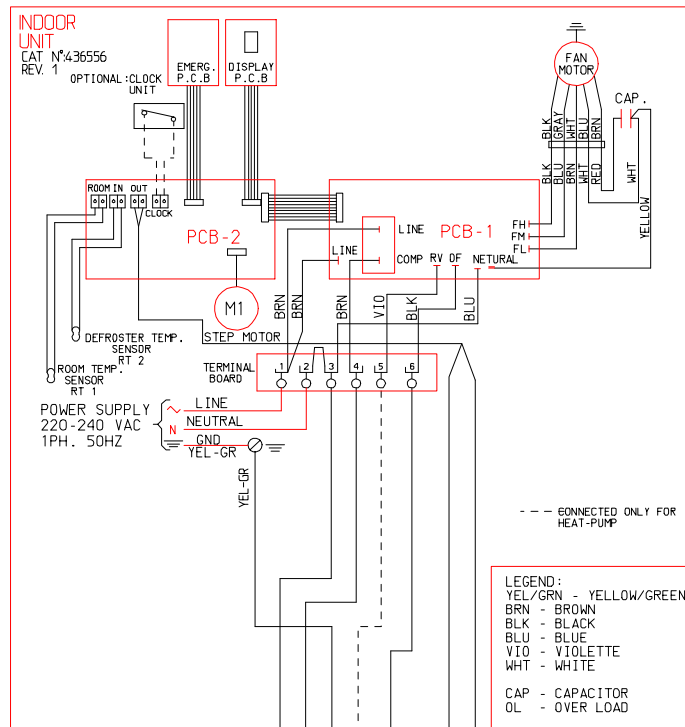
MAXIMUM REFRIGERANT TUBING LENGTH AND HEIGHT DIFFERENCE

MODEL	LENGTH (m) (A)	HEIGHT DIFFERENCE (m)
WMN/A/C/D-7	10	7
WMN/A/C/D-9,12,14,16	12	
WMN/A/C/D-18, 24	20	10

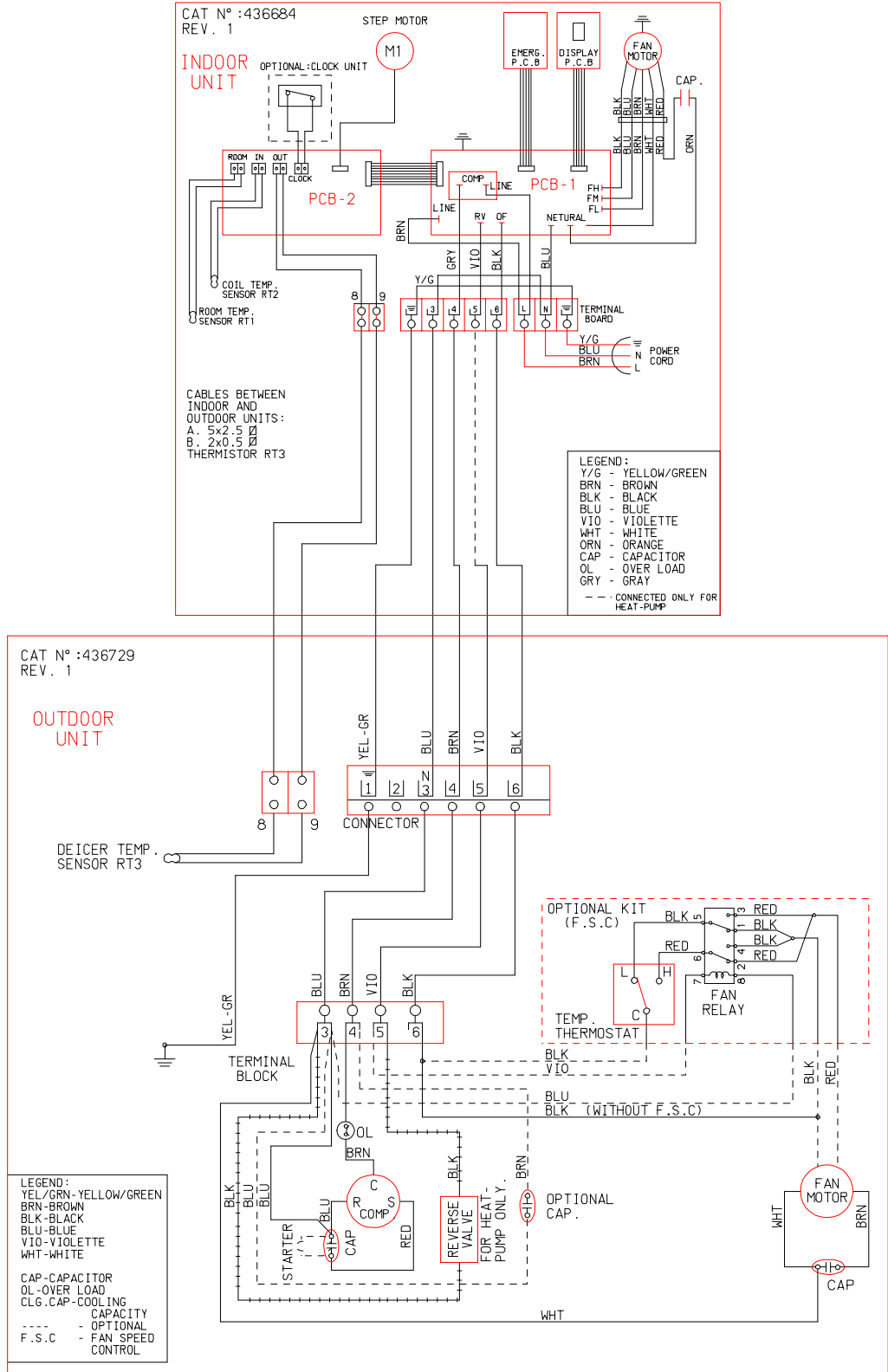


* THE INDOOR UNIT CAN BE ABOVE OR BELOW THE OUTDOOR UNIT.

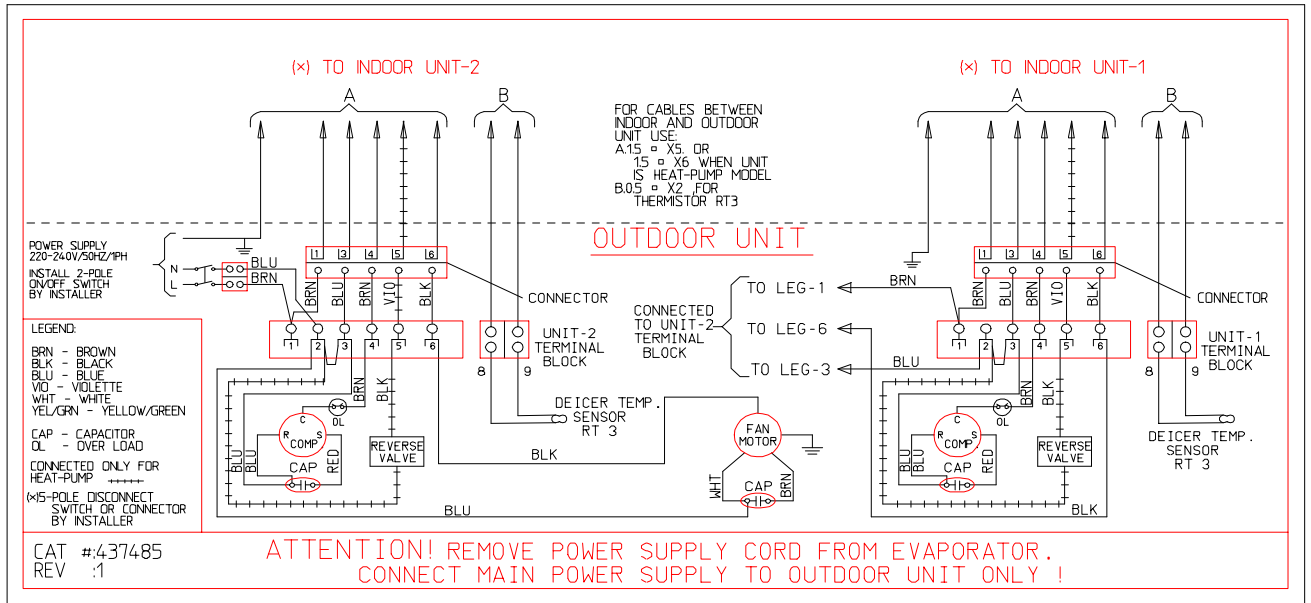
WMN-6 WIRING DIAGRAM

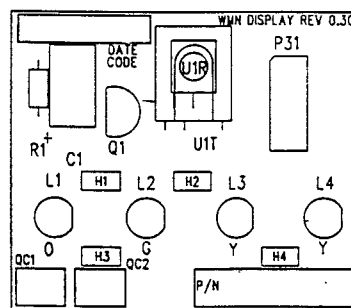
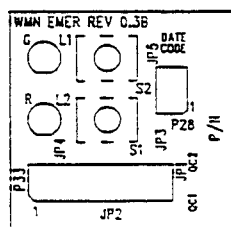
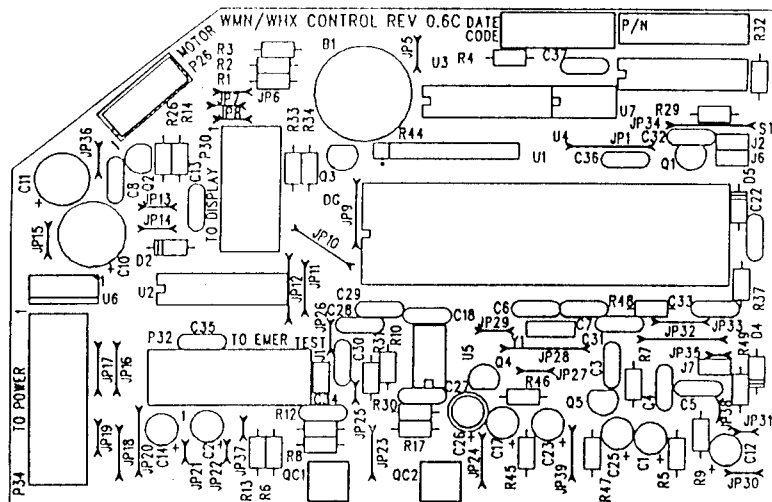
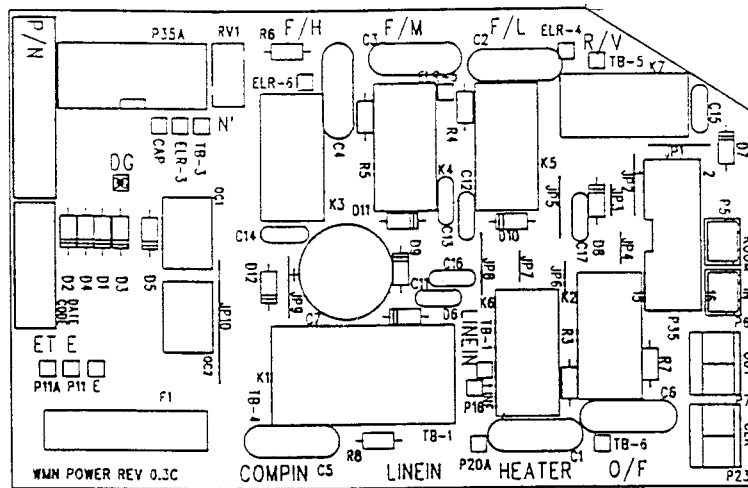


WMN 7-24 WIRING DIAGRAM



DUAL SPLIT WIRING DIAGRAM





1. General functions for all models.

- 1.1 For each Mode, 3 minutes minimum delay for COMP restarting, including POWER OFF or SB.
- 1.2 10 minutes minimum for COMP operation, excluding Dry, overflow and protection Modes.
- 1.3 Deicing control at Heating Mode only.
- 1.4 Defrosting control at Dry and Cooling Modes only.
- 1.5 High pressure protection at Dry, Cooling or Heating.
- 1.6 Minimum time between changing if speeds in auto fan Modes is 30 sec.
- 1.7 Minimum time for switching OF is 30 sec.
- 1.8 Minimum Heaters on or off time is 30 sec.
- 1.9 Only one output is activated at a time. The minimum delay between activating two outputs is 200 msec.
- 1.10 POWER OFF command to the controller will turn off the system immediately,

2. Abbreviations

ANY	- ON or OFFstatus
COMP	- Compressor
HE	- Heating Element
HPC	- High Pressure Control
ICP	- Indoor Condensate Pump
ICT	- Indoor Coil Temperature (RT-2)sensor
IF	- Indoor Fan
OCT	- Outdoor Coil Temperature (RT-3)sensor
OF	- Outdoor Fan
RAT	- Return Air Temperature (RT-1)sensor
RC	- Reverse Cycle (Heat Pump)
R/C	- Remote Control
RCT	- Remote Control Temperature
RV	- Reversing Valve
SB	- Stand-By
SH	- Supplementary Heater
SPT	- Set Point Temperature
ST	- Standard (a Model with Cooling Only)

3.0 Cooling Mode - General

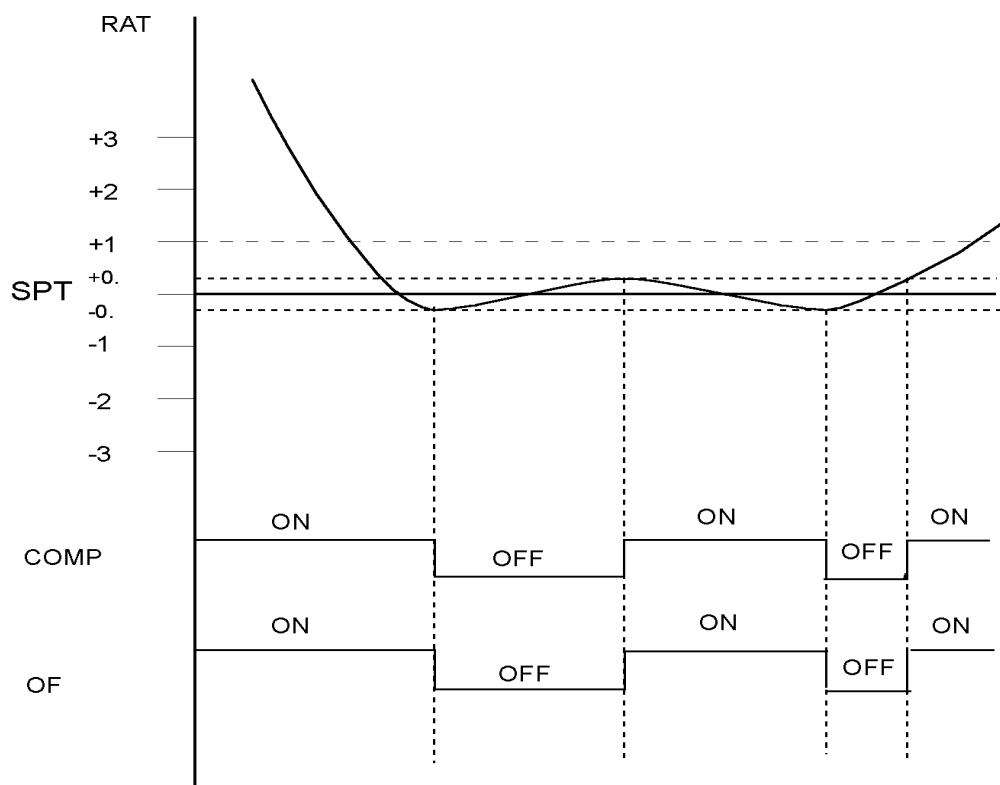
- 3.0.1 Return Air Temp. Is detected by RAT (RT-1) in normal operation, or RCT (R/C sensor) in I-FEEL mode.
- 3.0.2 RAT measured deviation is +/- 0.0°C .
 - a) RAT is activating COMP & OF if $RAT > SPT + 0^{\circ}C$.
 - b) RAT is stopping COMP & OF if $RAT \leq SPT - 0^{\circ}C$.
- 3.0.3 Indoor Coil Temp. is detected by ICT (RT-2)
- 3.0.4 Outdoor Coil Temp. is detected by OCT (RT-3).
- 3.0.5 OF starts together with COMP.

3.1 Cooling

Mode: Cool. Auto (At Cooling)
Temp: Selected desired temperature.
Fan: Hi, Med, Lo
Timer: Any
I Feel: On or Off

Cont Control function

Maintains room temp. at desired level by comparing RAT or RCT to SPT.

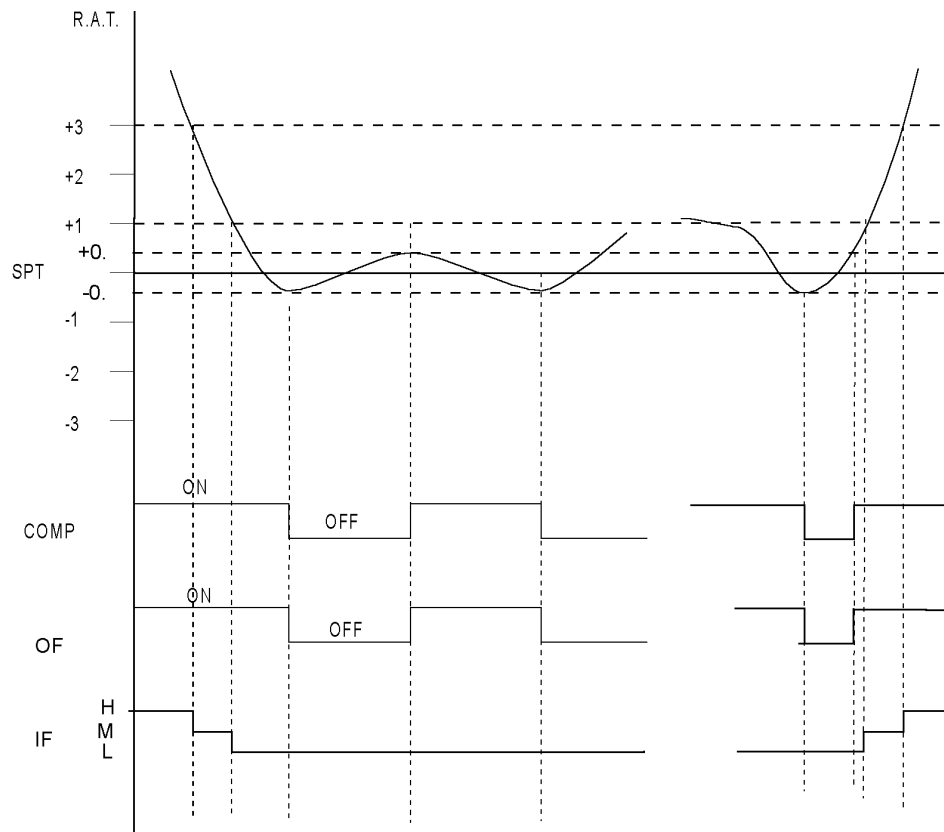


2 Cooling with Autofan.

Mode: Cool, Auto (At cooling)
 Temp: Selected desired temperature.
 Fan: Auto.
 Timer: Any
 I Feel: On or Off

Control function

Maintains room temp. at desired level and controls the IF speed for optimal comfort.



4.0 Heating modes - general

4.01 In heating or Auto Heating modes, temp. compensation schedule will be activated:

SPT ° C	Add to SPT	
	I Feel On	I Feel Off
18°C - 27°C	0°C	+2°C
28°C - 30°C	0°C	+3°C

4.0.2 Room Temp. is detected by RAT(RT-1) in normal operation, or (RCT (R/C Sensor) in I-FEEL mode.

4.0.3 Indoor Coil Temp. is detected by ICT(RT -2).

4.0.4 Outdoor Coil Temp. is detected by OCT (RT-3).

4.0.5 RAT measured deviation is +/-0.0°C from SPT.
 (a) RAT is activating COMP & OF if \leq SPT-0 °c..
 (b) RAT is stopping COMP & OF if $>$ SPT+0 °c.

4.0.6 OF starts together with COMP.

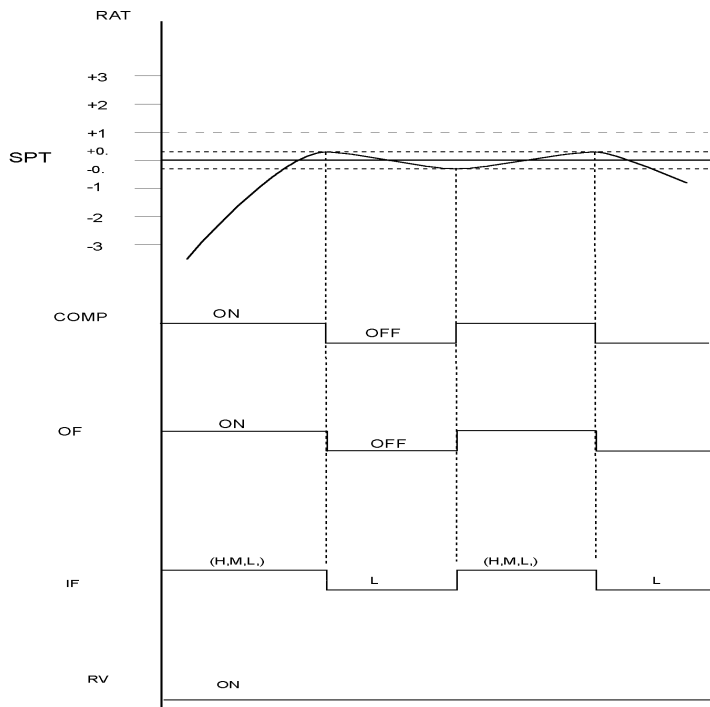
4.0.7 RV is OFF in RH group.

4.1 Heating , Reverse Cycle.

Mode: Heat, Auto (At heating)
 Temp: Selected desired temperature
 Fan: Hi , Med , Lo
 Timer: Any
 I Feel: On or Off

Control function

Maintains room temp. at desired level by comparing RAT or RCT to SPT.



Note: IF starts when:

- a) (ICT > 20°C) AND (30 sec after Heat Mode as started), or
 - b) (ICT thermistor is disconnected) AND (40 sec after COMP has started).
- IF stops when (18°C ≥ ICT).

4.2 Heating , Reverse Cycle and Autofan .

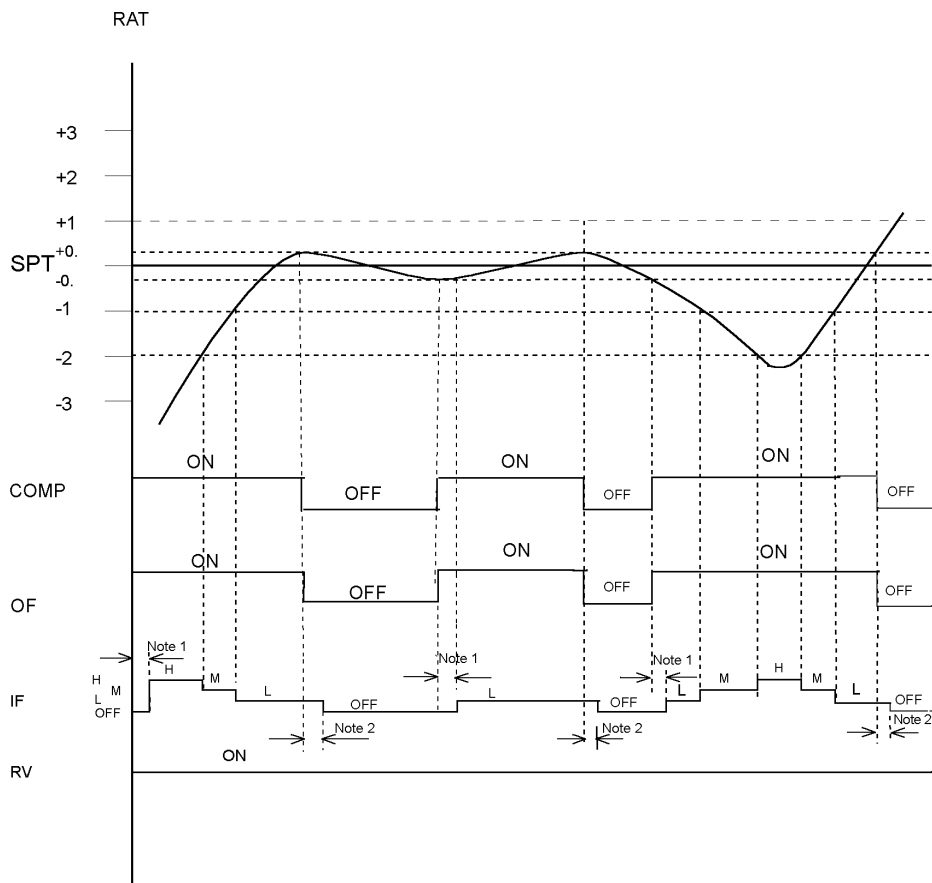
Mode: Mode: Heat, Auto (At heating)
 Temp: Temp: Selected desired temperature
 Fan: Fan: Auto
 Timer: Timer: Any
 I Feel: I Feel: On or Off

Cont Control function

Main Maintains room Temp. at desired level by controlling Comp, IF and OF.

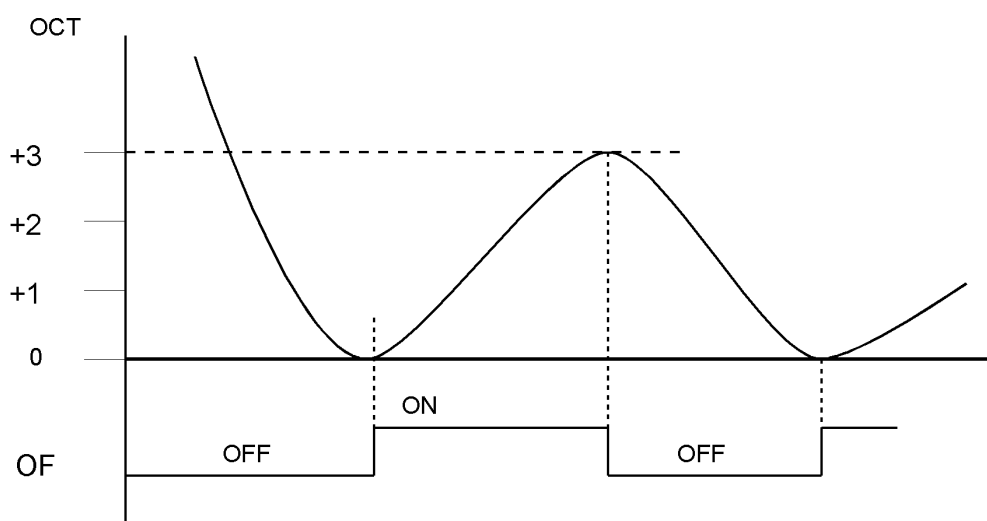
Note 1 : IF starts when :
 (a) (ICT > 40°C), or
 (b) (40°C ≥ ICT ≥ 30°C) AND (40 sec. After COMP is on).

Note 2 : IF stops when :
 (a) (30°C > ICT), or
 (b) (40°C > ICT ≥ 30°C) AND (40 sec after COMP is OFF).



- Note 3: OF is turned ON/OFF as below if
- (a) ($RAT \geq SPT - 2^{\circ}C$), AND
 - (b) ($ICT \geq 45^{\circ}C$), AND
 - (c) (COMP is ON)

Otherwise, OF runs together with COMP.



5.0 Automatic Cooling or Heating - General

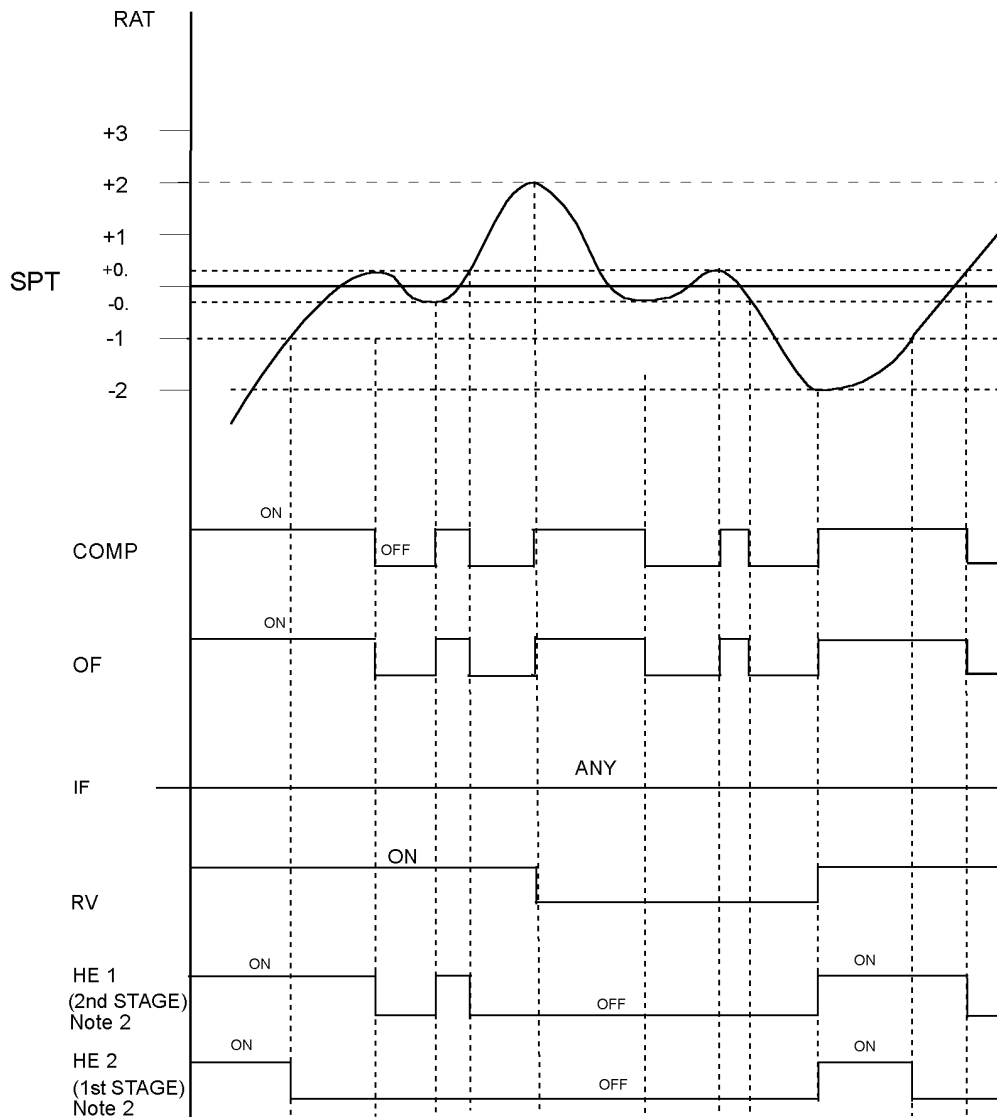
- 5.0.1 Switching temperature between Cooling and Heating is $SPT \pm 2^{\circ}C$.
- 5.0.2 Autofan in Automatic Cooling or Heating Mode will activate Heating and Autofan Mode or Cooling and Autofan Mode respectively .
 - 5.0.2.a for Cooling with Autofan, refer to para. 3.2.
 - 5.0.2.b for Heating with Autofan (RC Group), refer to para. 4.2.
 - 5.0.2.c for Heating with Autofan (RH Group), refer to para. 4.3.
 - 5.0.2.d for Heating with Autofan (SH Group), refer to para. 4.6.

5.1 Auto Cooling or Heating by Reverse Cycle

Mode: Auto
 Temp: Selected desired temperature.
 Fan: Any
 Timer: Any
 I Feel: On or Off

Control function

Maintains room temp. at desired level by selecting between cooling and heating modes.



NOTE 1: Heating Group can be either RC or SH according to Group select jumpers setup.
 NOTE 2: HE1 and HE2 are for SH Group only.

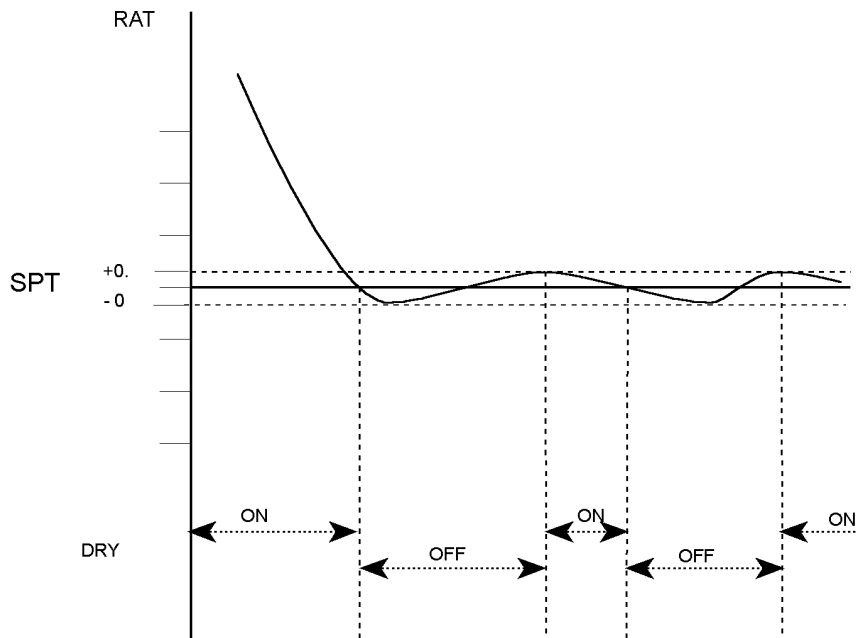
6.1 Dry for RC

Mode: Dry
 Temp: selected - desired temp.
 Fan: Low (Automatically selected by Software)
 Timer: Any
 I Feel: On or Off

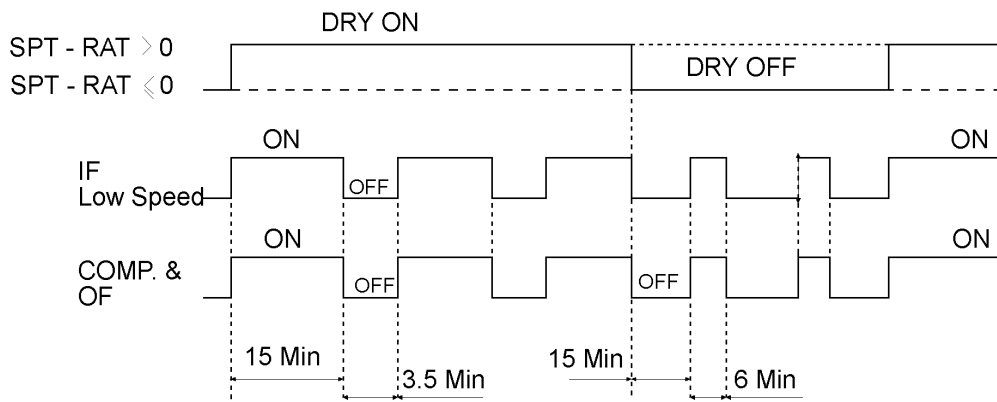
Control function:

Cooling operation is activated to dehumidify the room, while minimizing fluctuations of temp. .

COMP. is operated by temp. and time intervals. Room temp. is detected by RAT(RT-1 sensor), or RCT (at I Feel), and is compared to SPT.



TIME INTERVAL SCHEDULE :



Protection.

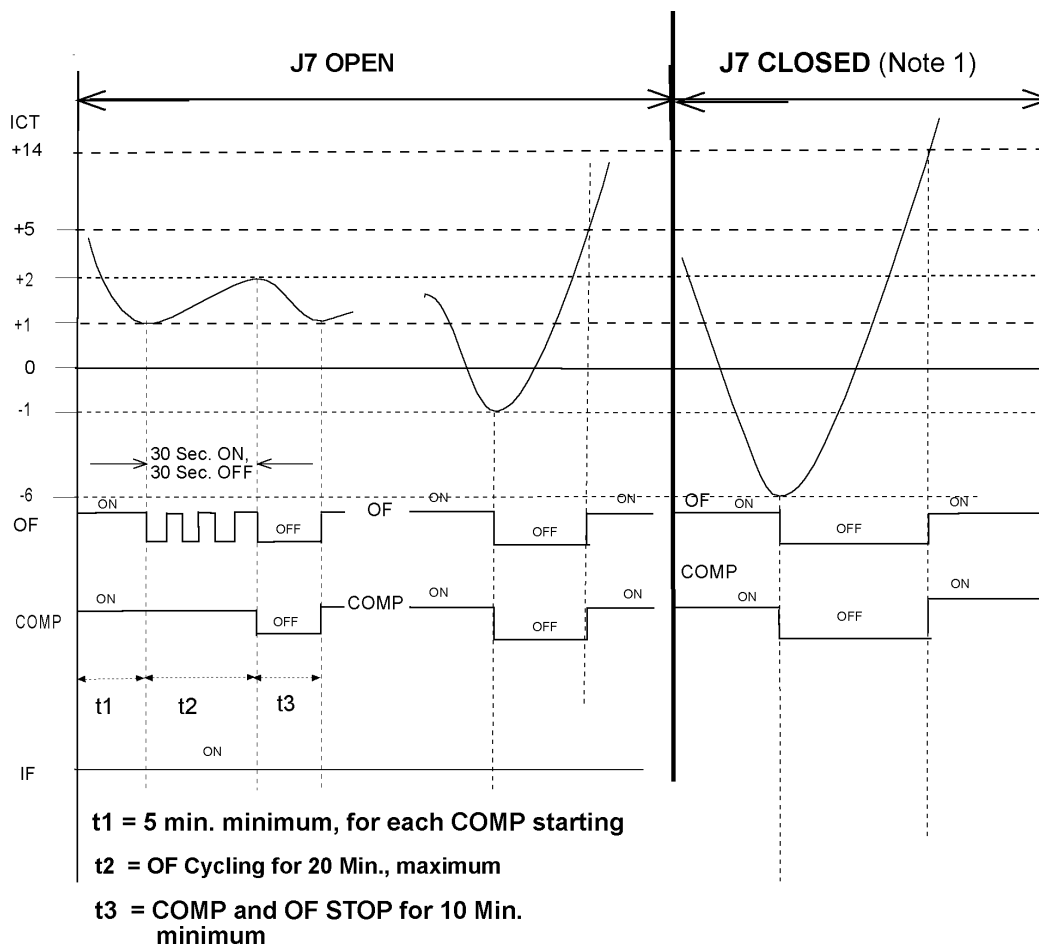
7.1 Cooling Mode

7.1.1 Indoor Coil Defrost .

Mode: Cooling, Dry, Auto (At cooling).
 Temp: Selected desired temp.
 Fan: Any
 Timer: Any
 I Feel: On or Off

Control Function

Protects the indoor coil from ice formation at low Ambient temperatures.



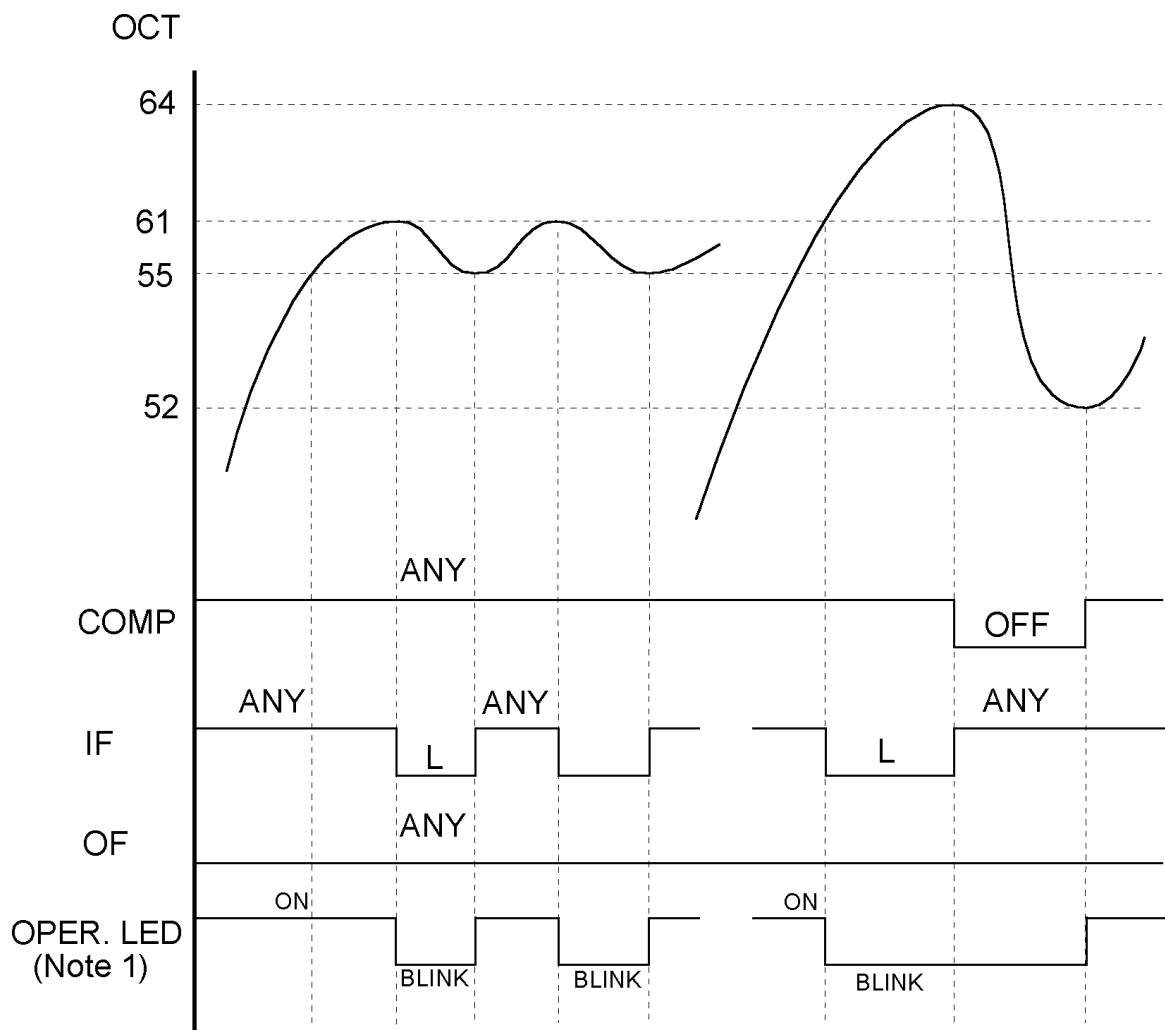
Notes :1. When J7 is closed (connected), OF cycling is cancelled and the set temperature for COMP & OF cut-out and cut-in are changed, i.e. COMP & OF are forced off when $ICT \leq -6^{\circ}C$ and are kept OFF until $ICT > 14^{\circ}C$.

7.1.2 High Pressure Protection (Outdoor Coil).

Mode: Cooling, Dry, Auto (at cooling).
 Temp: Selected desired temp.
 Fan: Any
 Timer: Any
 I Feel: On or Off.

Control Function

COMP High Pressure protection by switching off the IF and Compressor.



NOTE1: In EPE-800 model, operation LED starts to blink when Comp is Off.

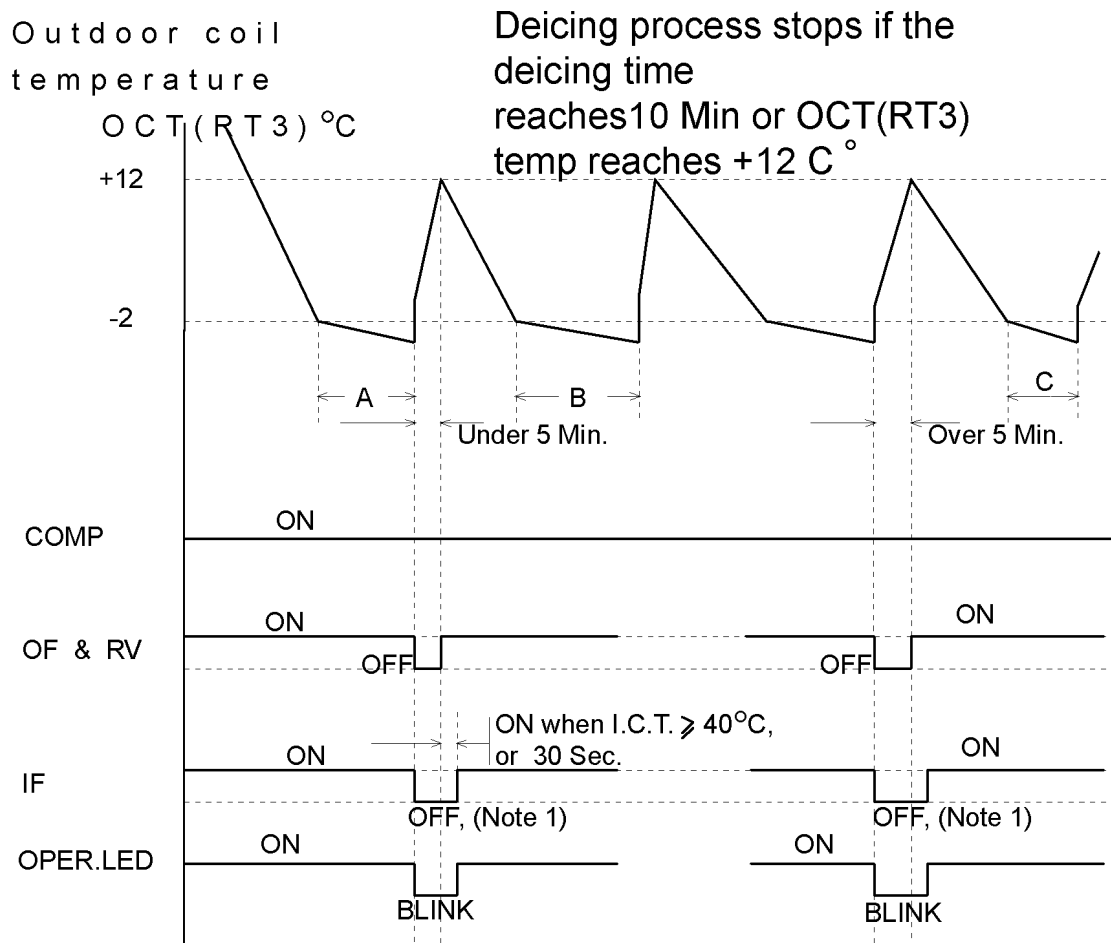
7.2 Heating Mode

7.2.1 Deicing by reverse valve (When heating).

Mode: Heating, Auto (at Heating)
 Temp: Selected desired Temp.
 Fan: Any
 Timer: Any
 I FEEL: On or Off

Control Function:

To Protect the outdoor coil from ice formation when unit operates at low outdoor temp. OCT is detected by OCT(RT-3 sensor).The control process is based on the combination of Temp and timed cycling.

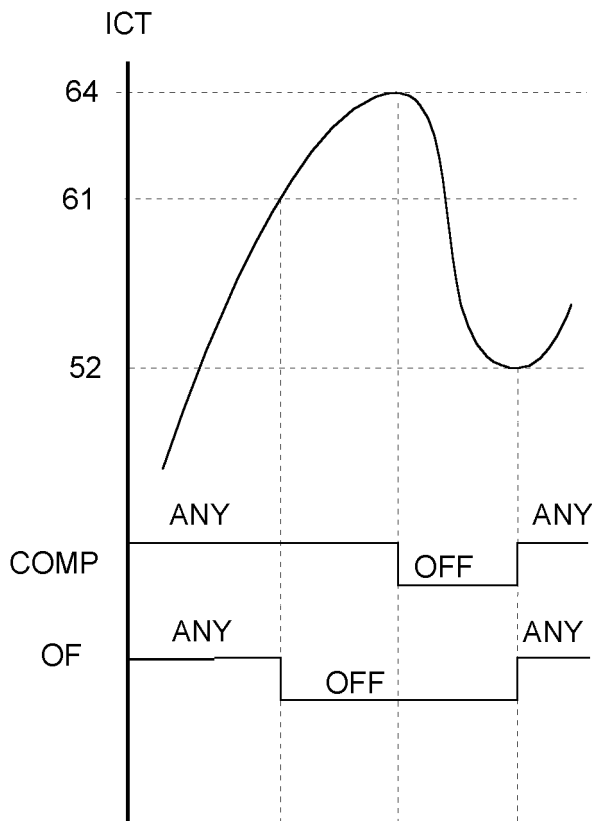


7.2.2 High pressure protection Indoor coil (excluding RH Group)

Mode: Heating, Auto (at heating)
 Fan: Any
 Timer: Any
 I Feel: On or Off

Control Function

To protect the Compressor from High Pressure by switching off the OF and compressor.



Note : IF , HE1 and HE2 will be activated according to the relevant

18. ON UNIT INDICATORS AND CONTROLS.

STAND BY INDICATOR	Lights up when the Air Conditioner is connected to power and ready to receive the R/C commands.
OPERATION INDICATOR	<ol style="list-style-type: none"> 1. Lights up during operation. 2. Blinks to announce that a R/C infrared signal has been received and stored. 3. Blinks during High Pressure Protection mode. 4. Blinks during Deicing in Heating mode.
TIMER INDICATOR	Lights up during timer and sleep operation
FILTER INDICATOR & WATER OVERFLOW INDICATOR	<ol style="list-style-type: none"> 1. Lights up when Air Filter requires cleaning. 2. Blinks during water overflow.
COOLING INDICATOR	Lights up when system goes into COOLING mode by pressing MODE SWITCH first time.
HEATING INDICATOR	Lights up when system goes into HEATING mode by pressing MODE SWITCH second time.
MODE SWITCH (COO/HEAT/OFF)	<p>Used to switch the A/C unit between COOLING, HEATING and OFF modes, without using the R/C.</p> <ul style="list-style-type: none"> -Pressing the switch first time switches the unit to COOLING mode. -Pressing the switch second time switches the unit to HEATING mode. -Pressing the switch third time switches the unit to OFF(STDBY) mode.
RESET/CANCEL SWITCH	<ol style="list-style-type: none"> 1. Press to turn off the FILTER INDICATOR after a clean filter has been installed. 2. Press to cancel the buzzer announcer, if elected.

SELF TEST

STEP 1: ENABLE SELF TEST MODE

Short jumper j1 on the CONTROL BOARD. For WMN model short pins 5&6 on the EMERGENCY SERVICE PLUG. (see note 1)

STEP 2 : TURNING ON THE POWER .

TURN ON THE POWER

The following four testing modes will take place at the same time.

1) Testing the mode of operation : ST+SH (see note 2)

ACTION : THE STAND-BY LED will indicate the operation mode as following:

OPERATION MODE	STAND-BY LED
ST+RH	ON
RC+SH	OFF

2) Testing the Model configuration. selected by jumpers j3,j4,j5.

ACTION : The STAND-BY and TIMER LEDS will indicate the model configuration as follows:

MODEL	OPERATE LED	TIMER LED	FILTER LED
ESM	OFF	OFF	OFF
EMP	OFF	OFF	ON
WMX	OFF	ON	OFF
PX	OFF	ON	ON
PR	ON	OFF	OFF
WMN	ON	OFF	ON
RWK /ELD	ON	ON	OFF
ECC	ON	ON	ON

3) STEP MOTOR TESTING.

ACTION: The step motor will turn to HOME POSITION.

4) FREQUENCY TESTING.

If zero crossing timing is within 90HZ to 110HZ +/-5HZ.

ACTION : The COOL LED will turn to OFF, otherwise the COOL LED will turn ON.

STEP 3 : PRESS MODE BUTTON.

ACTION:

1) All the LED'S will turn OFF.

2) All the LED'S will turn ON for 1 second one by one in the following sequence :
STAND-BY ⇒ OPERATE ⇒ TIMER ⇒ FILTER ⇒ COOL ⇒ HEAT.

3) AUTO RELAY WALK TEST : All relays will turn ON one by one in the following sequence :
COMPRESSOR ⇒ OUTDOOR FAN- ⇒ R.V. ⇒ HEATER 1 - ⇒ HEATER 2 ⇒
INDOOR WATER PUMP ⇒ SWING or OUTDOOR WATER PUMP ⇒
INDOOR FAN: ---LOW --MID. -- HIGH.

NOTE : ONLY the relevant relays for each model will be activated.

STEP 4 : PRESS RSET BUTTON

Checking the buzzer.

ACTION : A single beep will sound.**STEP 5 : PRESS FAN BUTTON FROM THE REMOTE CONTROL.**

Checking the communication between the remote control and CPU.

ACTION : A double beep will sound.**STEP 6 : PRESS MODE BUTTON.**

Checking thermistors analog voltage.

ACTION : STAND-BY LED , OPERATE LED AND TIMER LED MAY TURN ON - PLEASE IGNOR THE RESULT FROM THIS TEST.**STEP 7 : PRESS MODE BUTTON.**

Checking the memory (EEPROM MEMORY TEST)

ACTION : STAND-BY LED will turn ON if 9696H had been written in the EEPROM on all adresses.

If the above adress is not written in the EEPROM the FILTER LED will turn ON.

This test is for reference only, showing that a full computer test have been done in the production of the controller.

AT THIS POINT THE SELF-TEST IS COMPLETED.

PULL OUT THE SHORTING JUMPER FROM J1 OR PIN 5-6 ON THE EMERGENCY SERVICE PLUG.

NOTES : 1) Emergency service plug layout.

5	3	1
6	4	2

2) LEGEND for operating Modes:

ST = Standard (cooling only)

RH = Resisting Heater (Heating by heater element only)

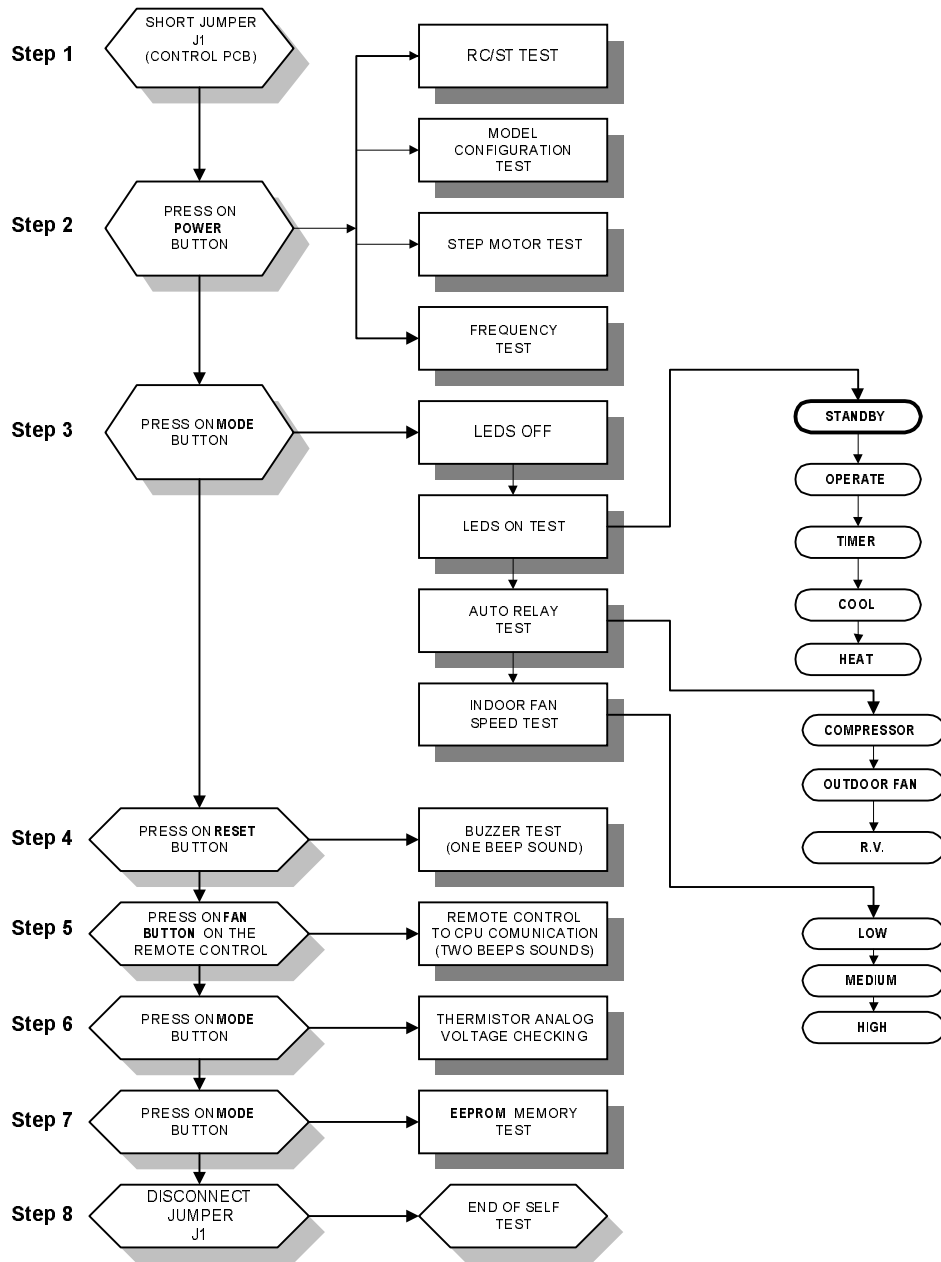
RC = Reverse Cycle.

SH = Supplementary Heater.(Heating by RC and Heater element)

3) In order to stop the self test turn off the power.

SELF TEST DIAGRAM

FOR CONTROLLER (VERSION 4V5 OR HIGHER)



ELECTRICAL & CONTROL TROUBLESHOOTING

ATTENTION : check for broken or loose cable lugs first.

NO	SYMPTON	PROBABLE CAUSE	CORRECTIVE ACTION
1.	The power supply indicator (red led) doesn't light up.	There is no correct voltage between the line and neutral terminals on main P.C.B.	-If the voltage is low repair power supply. -If there is no voltage repair general wiring. -If there is correct voltage replace main or display P.C.B'S
2.	The operating indicator (green led) does not light up.	The remote control batteries are discharged	-Replace batteries of the remote control
3.	The operating indicator (green led) does not light up when starting from unit.	Check main P.C.B and display P.C.B.	-Replace P.C.B if necessary.
4.	The indoor fan does not function correctly.	Check the voltage between indoor fan terminals on the main P.C.B	- If there is voltage replace capacitor or motor.
5.	The outdoor fan does not function correctly.	Check the voltage between indoor fan terminals on the main P.C.B. There is voltage between outdoor fan terminals on the outdoor unit. There is no voltage between outdoor fan terminals on the outdoor unit.	- If there is no voltage replace main P.C.B - Replace capacitor or motor. - Check and repair electrical wiring between indoor and outdoor units.
6.	The compressor does not start up.	Check voltage on compressor terminals on the outdoor unit. (with ampmeter) Check if there is correct voltage between compressor terminals on the outdoor unit.	-If no voltage replace main P.C.B. - If low voltage repair power supply. -If the voltage correct replace capacitor or compressor. -If there is no voltage repair electrical wiring between indoor and outdoor units.
7.	The refrigeration system does not function correctly.	Check for leaks or restrictions, with ampmeter, pressure guage or surface thermometer.	- Repair refrigeration system and charge refrigerant if necessary.
8.	No cooling or heating only indoor fan works.	Outdoor fan motor faulty or other fault caused, compressor overload protection cut out.	-Replace P.C.B. - Outdoor fan blocked remove obstructions.

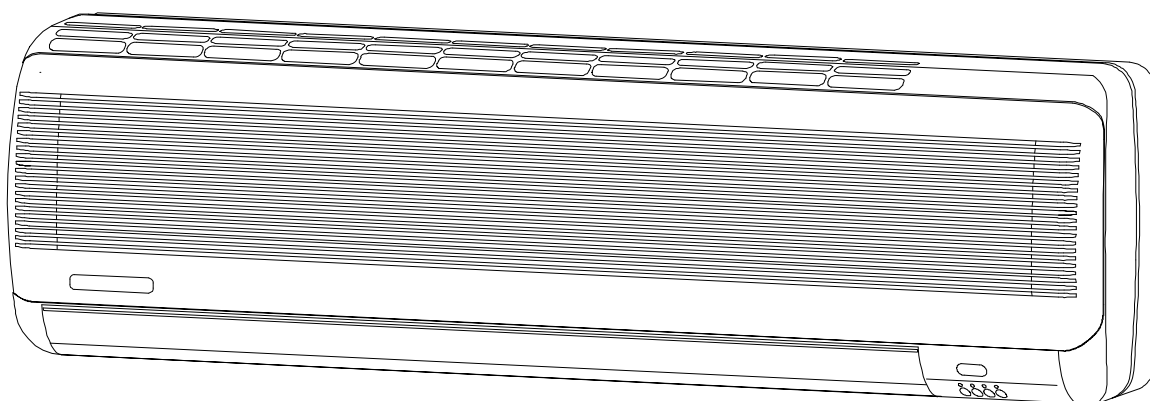
ATTENTION : check for broken or loose cable lugs first

NO	SYMPTON	PROBABLE CAUSE	CORRECTIVE ACTION
9.	Only indoor fan and compressor working.	Outdoor fan blocked.	- Remove obstructions.
10.	Only indoor fan working.	-Run capacitor of outdoor fan motor faulty. -Windings of outdoor fan are shorted.	- Replace capacitor. -Replace motor.
11.	No cooling or heating takes place, indoor and outdoor fans working.	- Overload safety device on compressor is cut out (low voltage or high temperature) - Compressor run capacitor faulty. - Compressor windings are shorted.	- Check for proper voltage, switch off power and try again after one hour. - Replace compressor capacitor. - Replace compressor.
12.	No air supply at indoor unit, compressor operates.	-Indoor fan motor is blocked or turns slowly. -indoor fan run capacitor faulty. - motor windings are shorted.	- Check voltage,repair wiring if necessary. -Check fan wheel if it is tight enough on motor shaft,tighten if necessary. -Replace indoor fan motor.
13.	Partial, limited air supply at indoor indoor unit.	Lack of refrigerant (will accompanied by whisteling noise) cause ice formation on indoor unit coil in cooling mode.	-Charge the unit after localizing leak.
14.	Water accumulates and overflow from indoor unit section.	Drain tube or spout of drain pan clogged.	-Disassemble plastic drain tube from spout of indoor unit drain pan.
15.	Water dripping from outdoor unit base. (in heating mode)	Water drain outlet is clogged.	-Open outdoor unit cover clean out water outlet ,clean the base inside thrughly.
16.	Freeze-up of outdoor coil in heating mode, poor heating effect in room, indoor fan operates.	-Faulty outdoor thermistor. -Faulty control cable. - Outdoor temperature is too low (below -2°C) -Outdoor unit air outlet is blocked.	-Replace thermistor. - Repair control cable. - Shut unit off, outdoor temp. is below design conditions and cannot function properly. -Remove obstructions.

ILLUSTRATED PARTS BREAKDOWN WALL MOUNTED SPLIT AIR CONDITIONER

MODEL:WMN 6,7,9,12

PRODUCT GROUP NO. WMN6 - 8016
WMN7 - 8011
WMN9 - 8012
WMN12 - 8013



8011/2/3/6-00

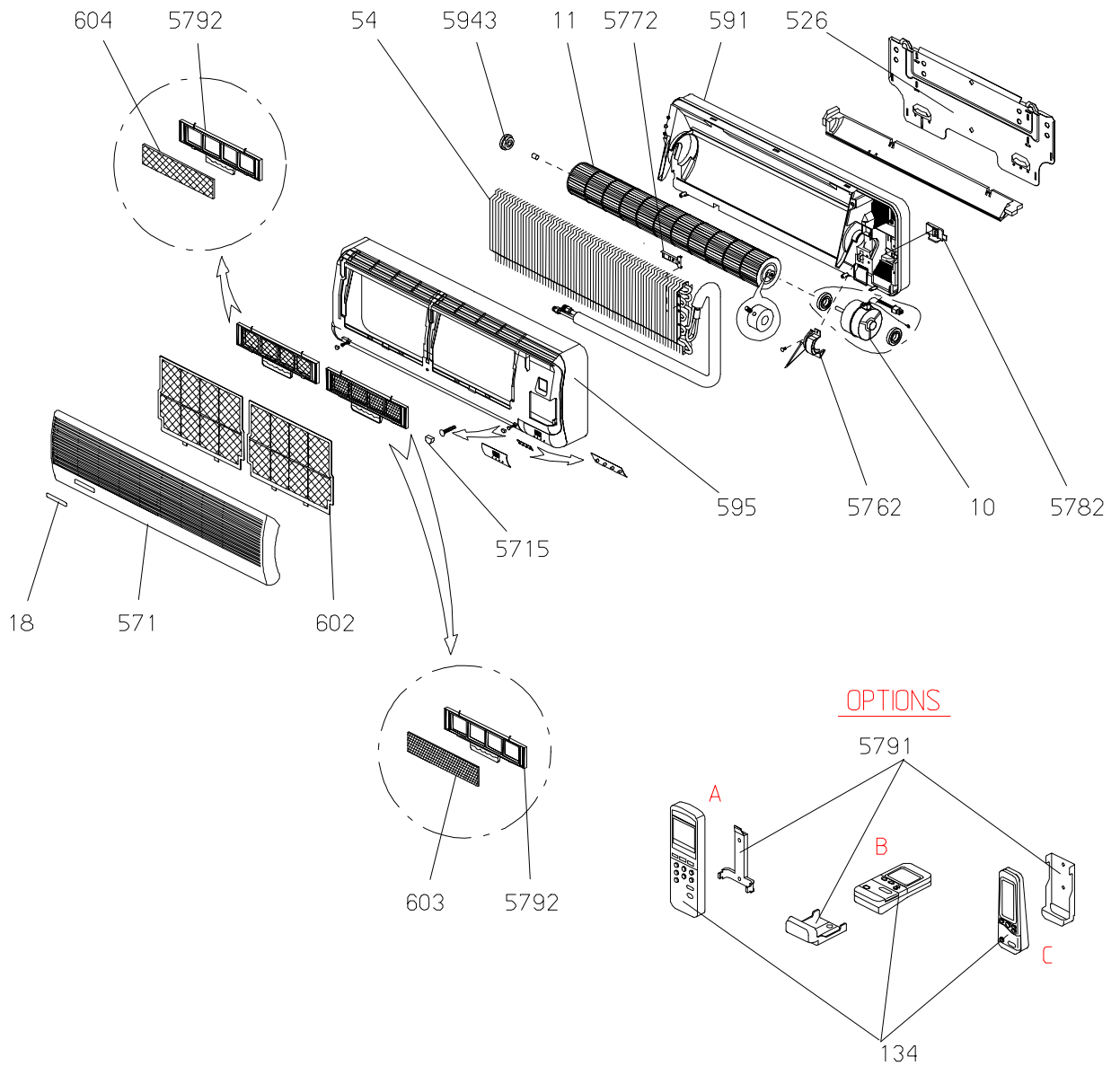


FIG.#1 - INDOOR UNIT
 PRODUCT GROUP NO. 8011/2/3/6

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8011/2/3/6-01

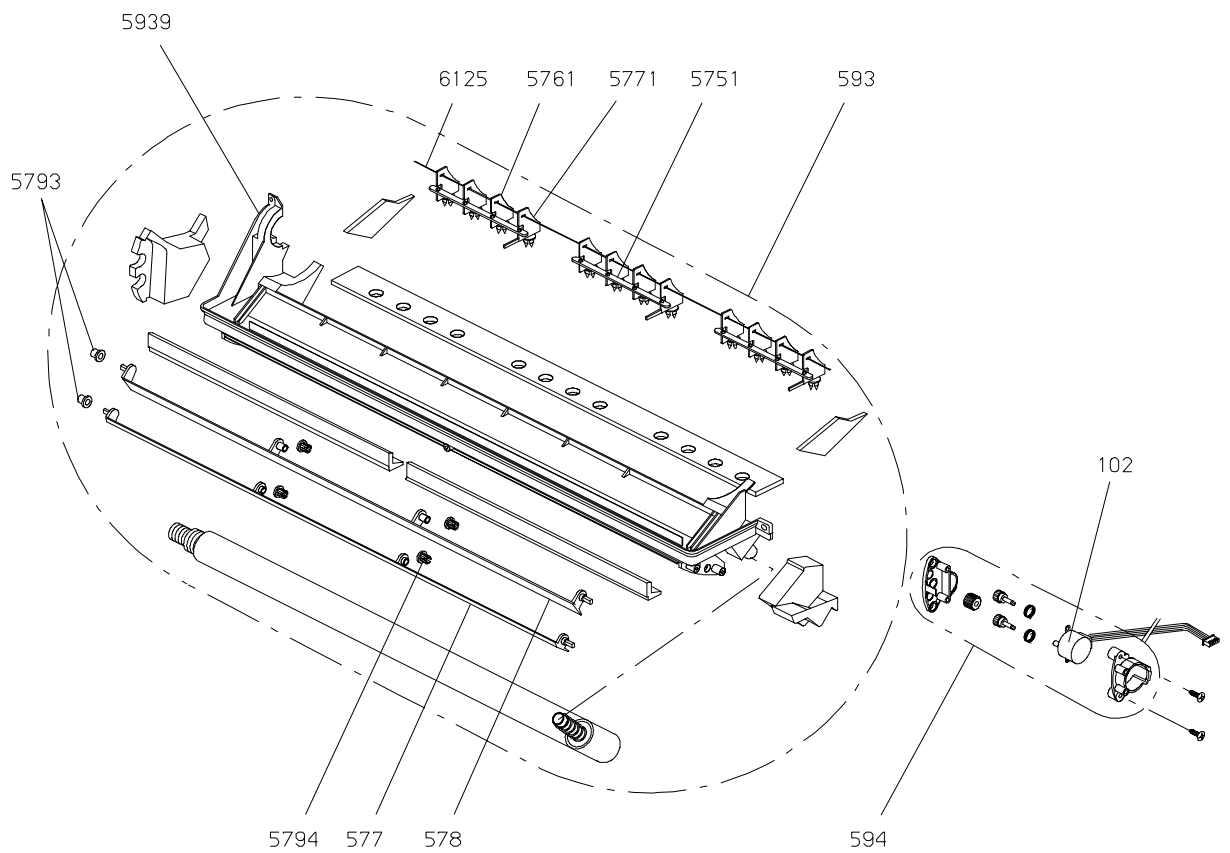


FIG.#2 -AIR OUTLET FRAME ASSY

PRODUCT GROUP NO. 8011,12,13,16

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8011/2/3/6-02

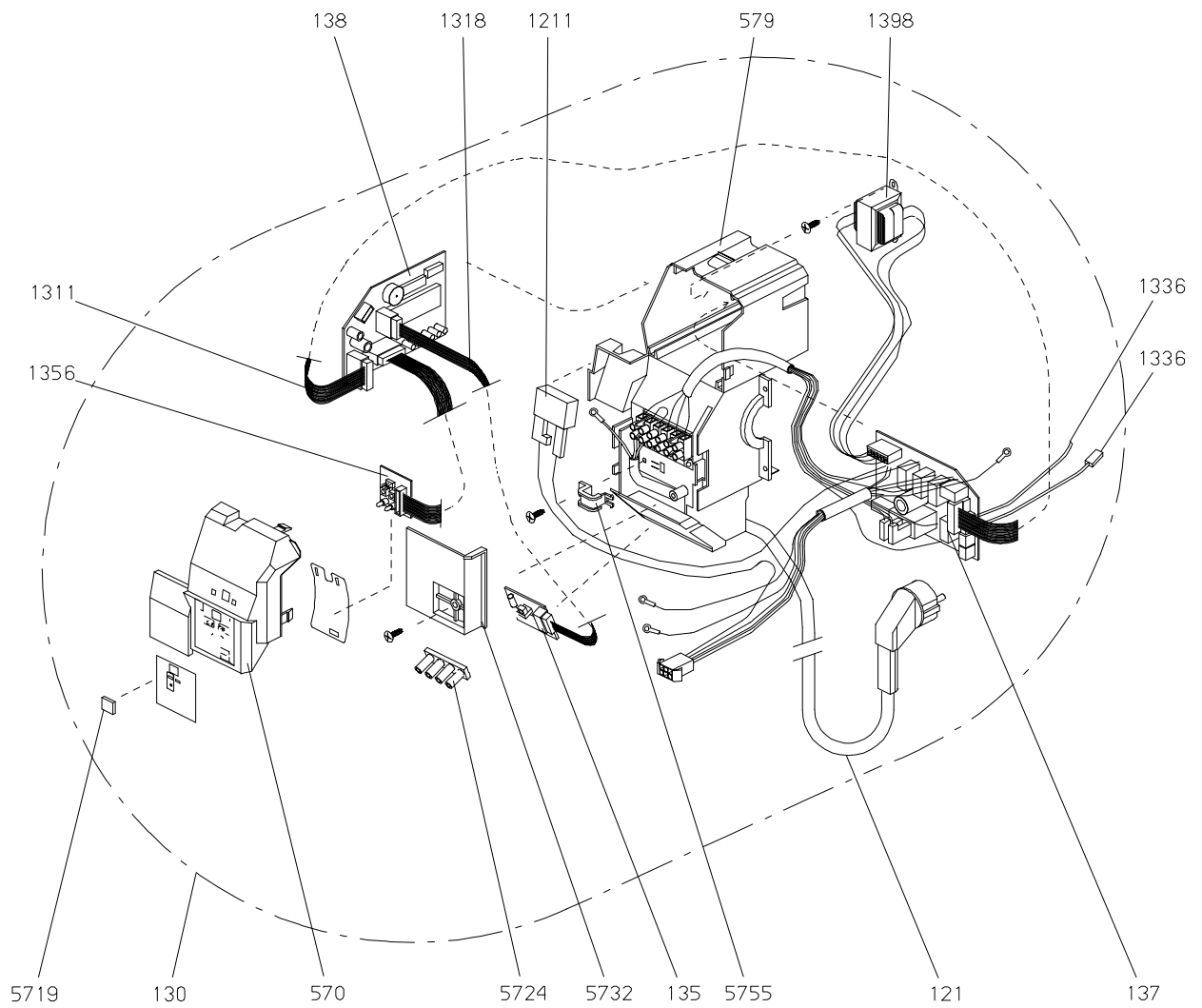


FIG.#3 -ELECTRIC CONTROL ASSY.

PRODUCT GROUP NO. 8011,12,13,16

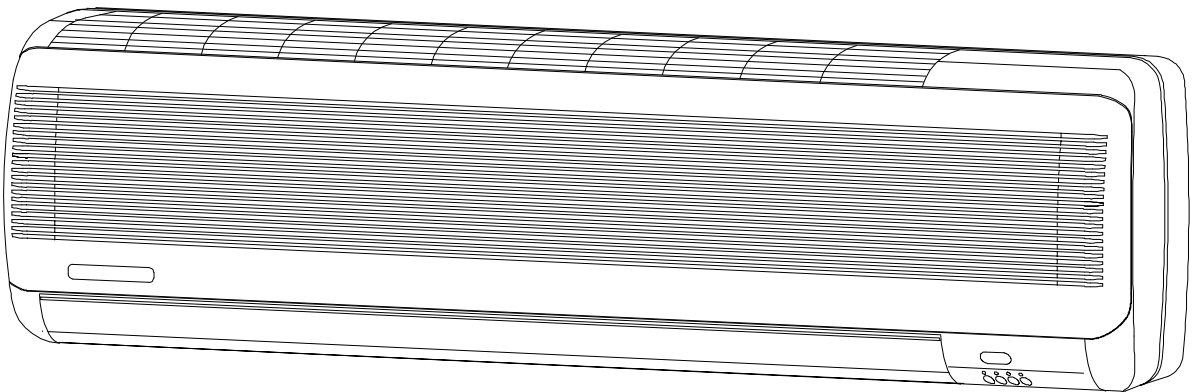
FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8011/2/3/6-03



WALL MOUNTED SPLIT AIR CONDITIONER

PRODUCT GROUP NO. 8361, 8362



8361/2-00

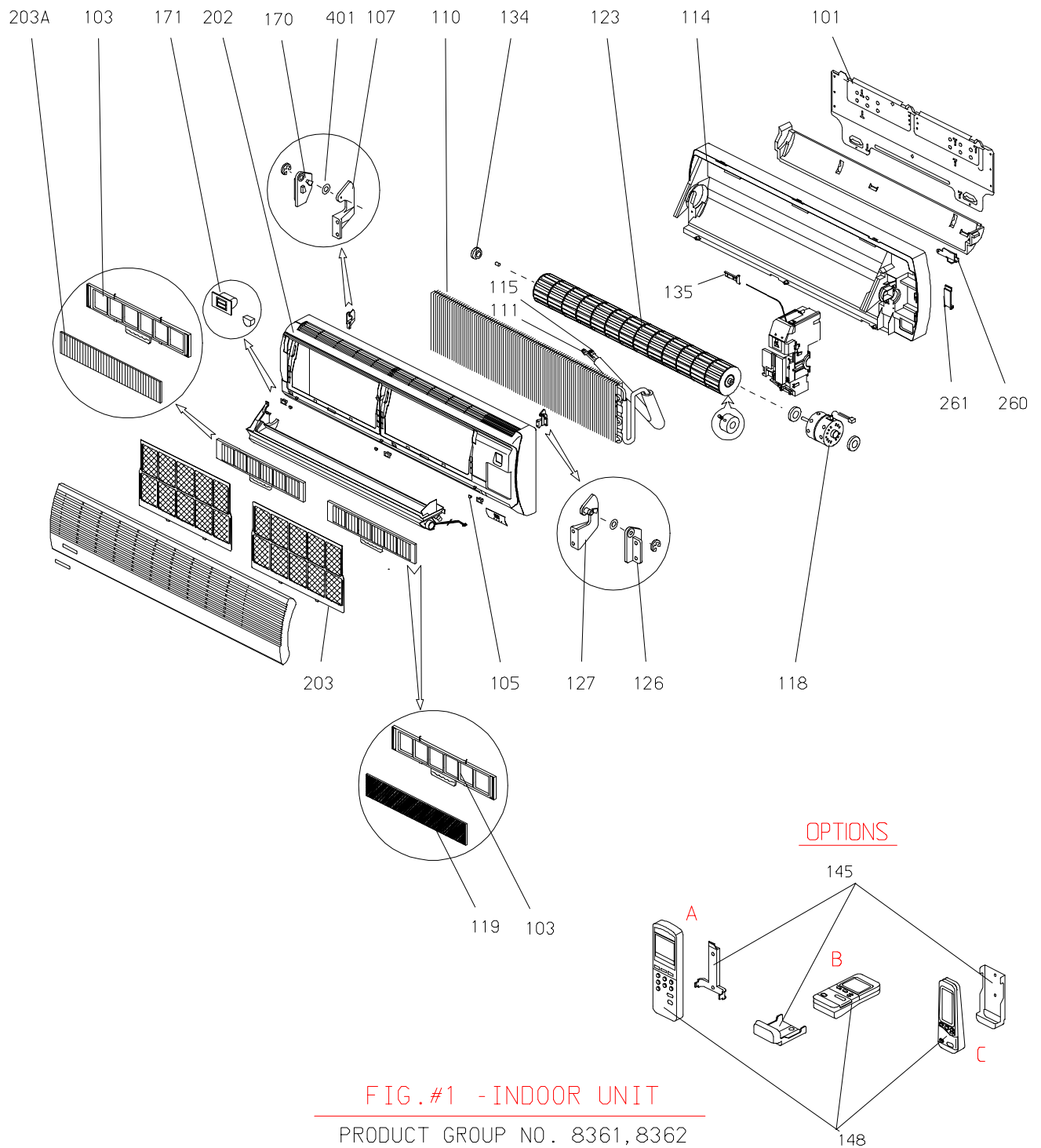


FIG.#1 -INDOOR UNIT
 PRODUCT GROUP NO. 8361, 8362

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8361/2-01

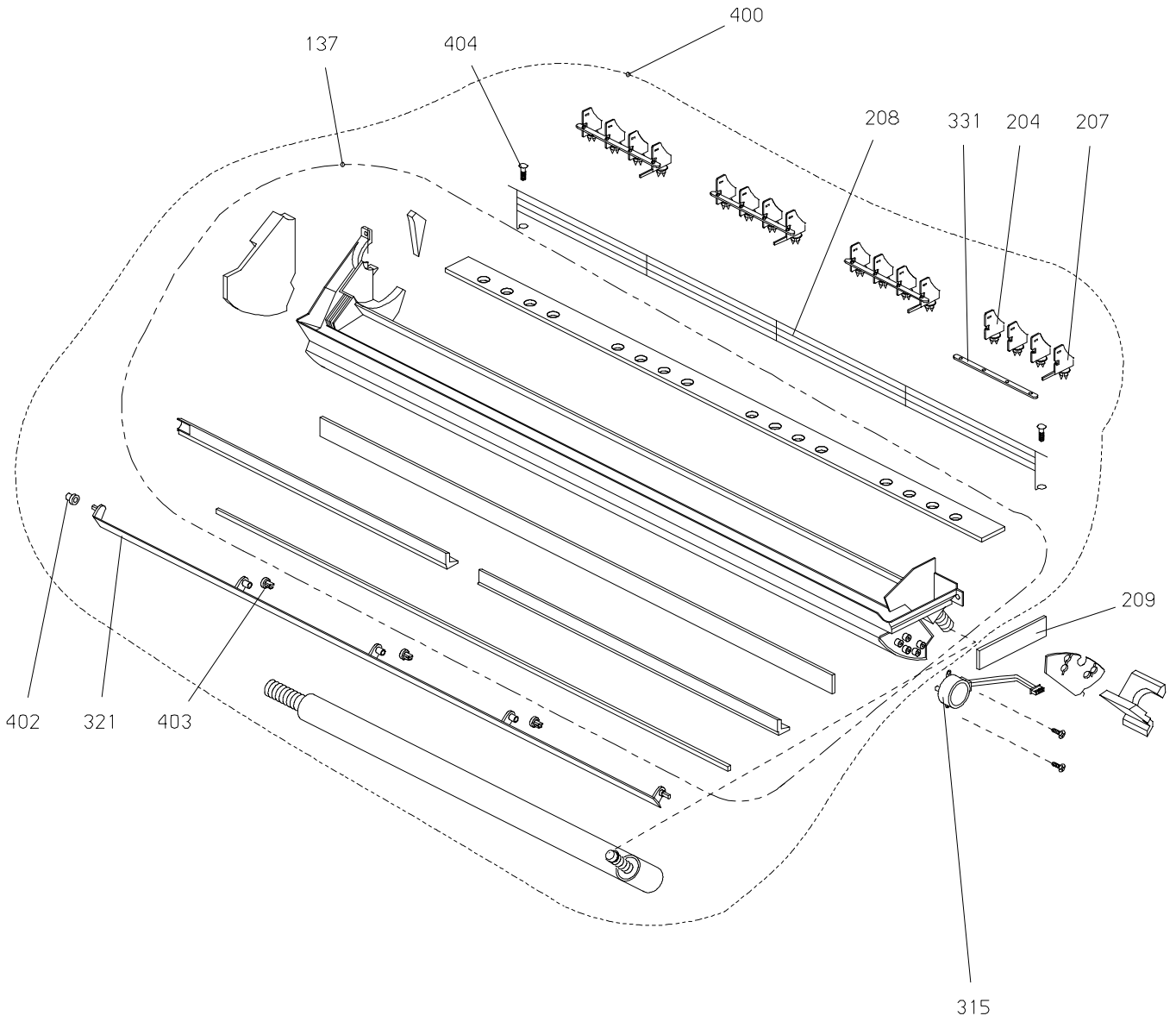


FIG.#2 -AIR OUTLET FRAME ASSY

PRODUCT GROUP NO. 8361, 8362

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8361/2-02

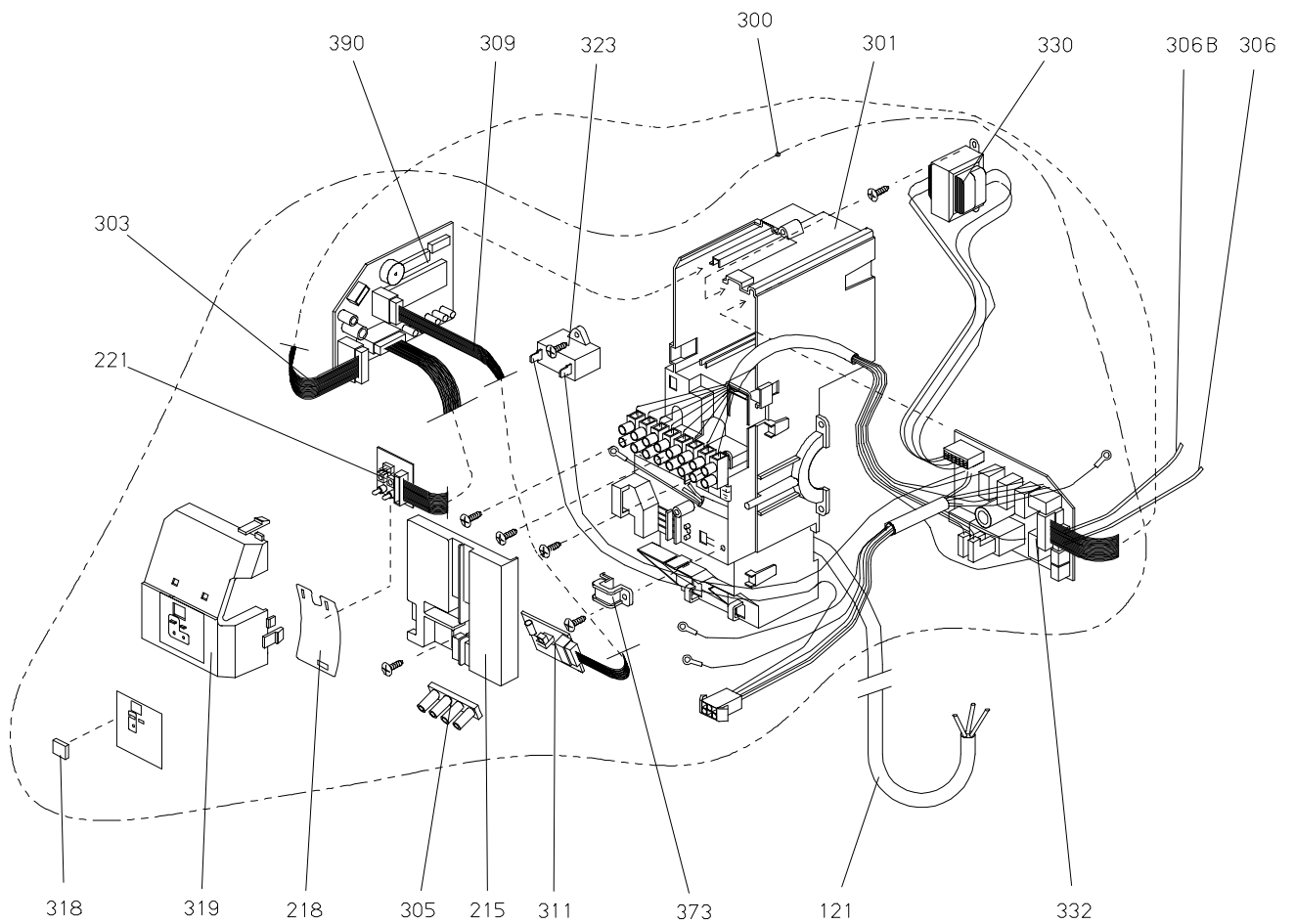


FIG.#3 -ELECTRIC CONTROL ASSY

PRODUCT GROUP NO. 8361,8362

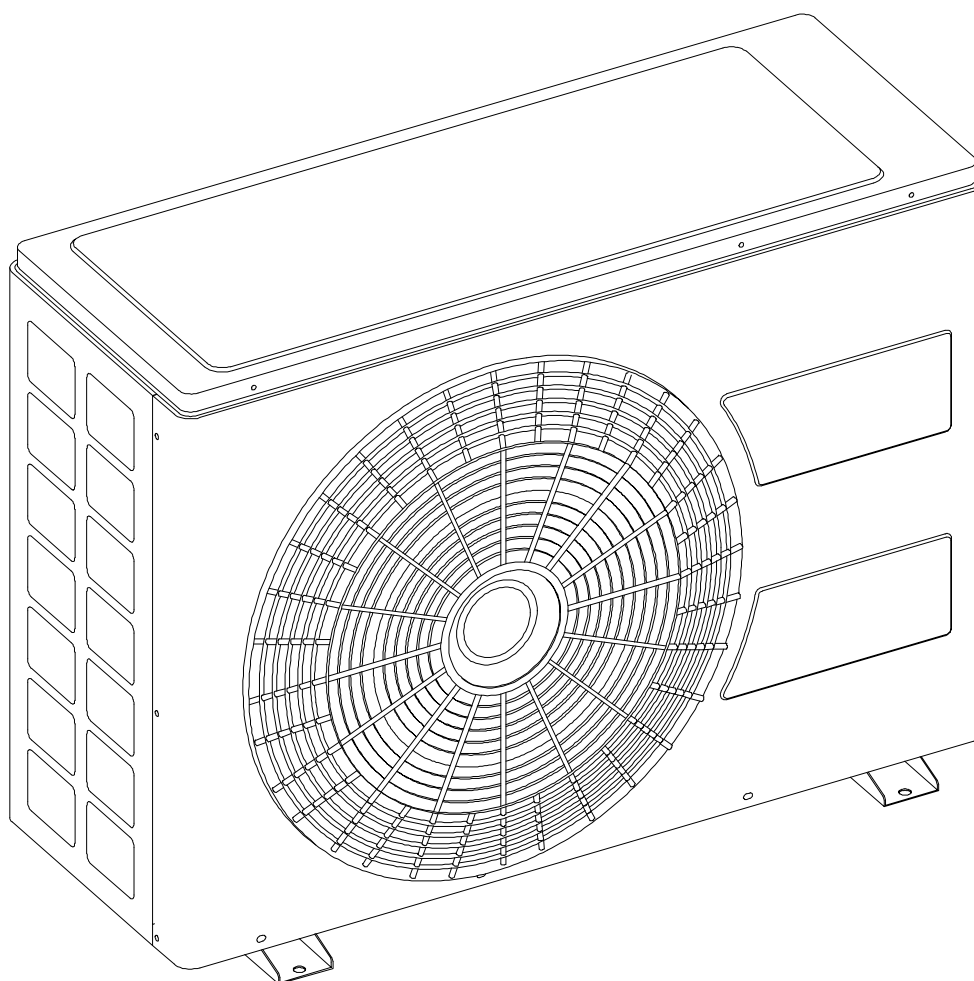
FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8361/2-03

ILLUSTRATED PARTS BREAKDOWN SPLIT AIR-CONDITIONER

MODEL: CUE 15,20,30,40

PRODUCT GROUP NO. CUE15 - 8011
CUE20 - 8012,8022,8301,8351
CUE30 - 8013,8017,8241,8302,8352
CUE40 - 8015,8242,8303



8011/8303-00

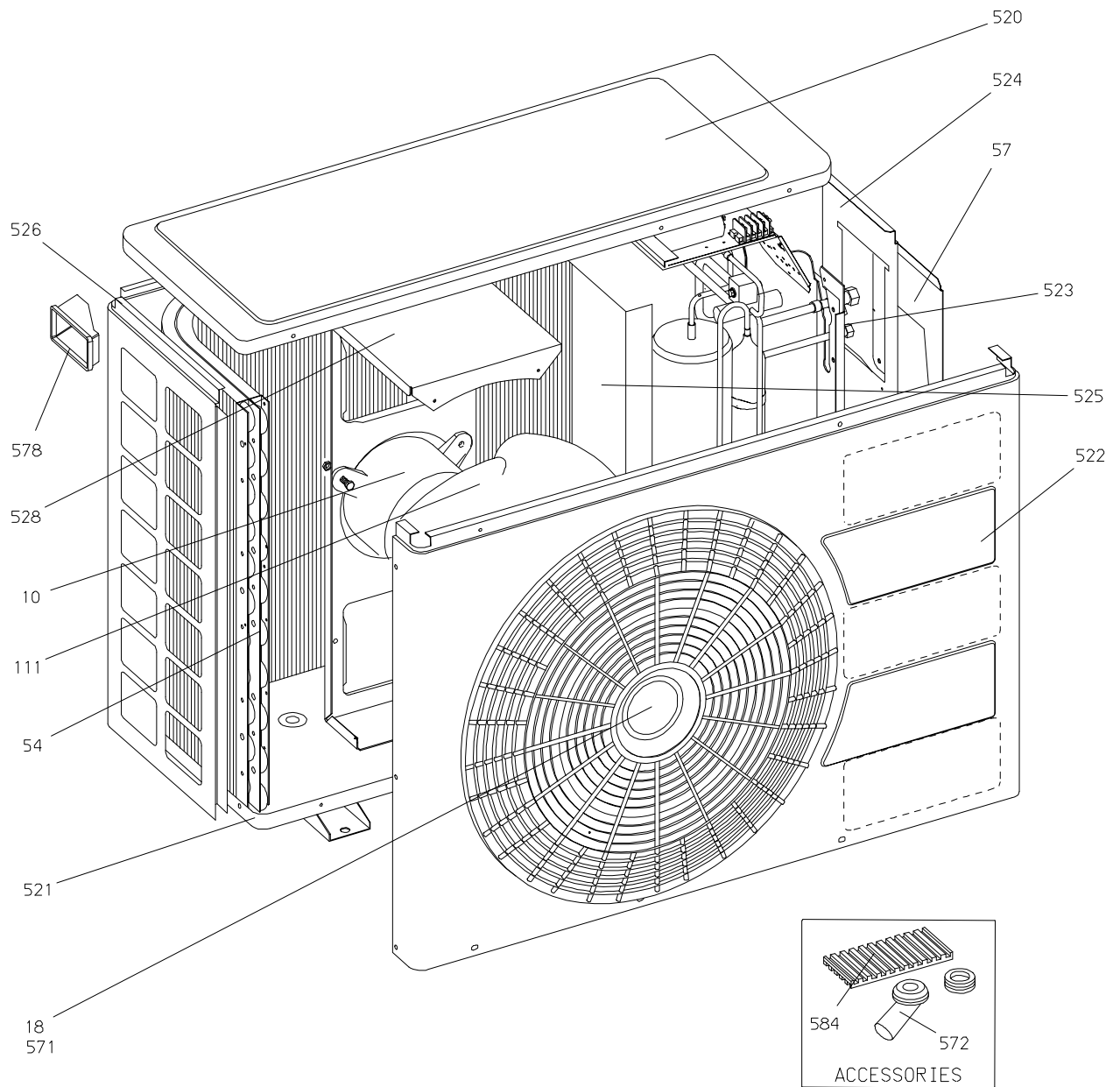


FIG.#1 -GENERAL ASSEMBLY - CUE-15,20,30,40

PRODUCT GROUP NO. 8011/8303

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8011/8303-01

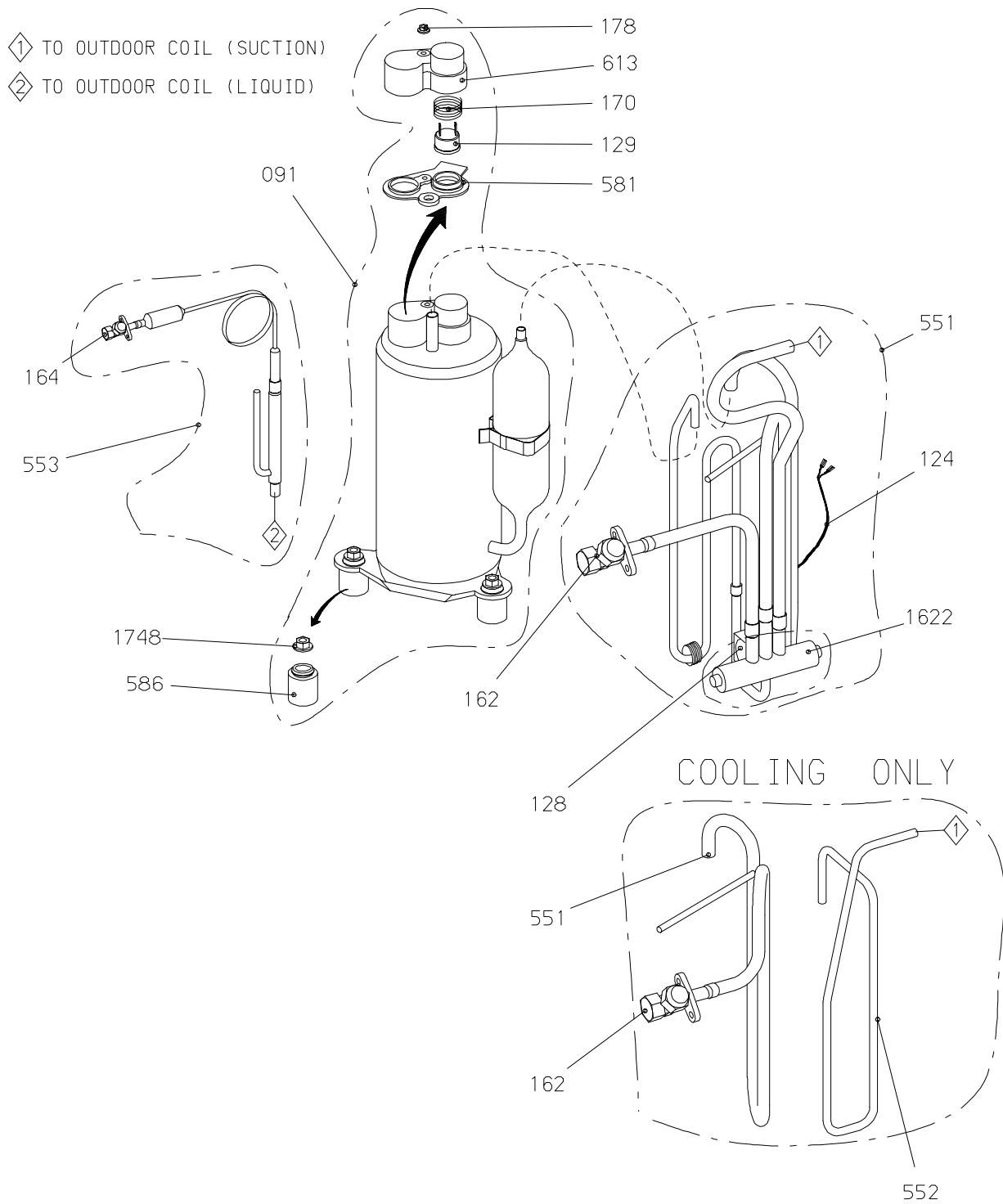


FIG.#2 -REFRIGERATION - CUE-15,20,30,40

PRODUCT GROUP NO. 8011/8303

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8011/8303-02

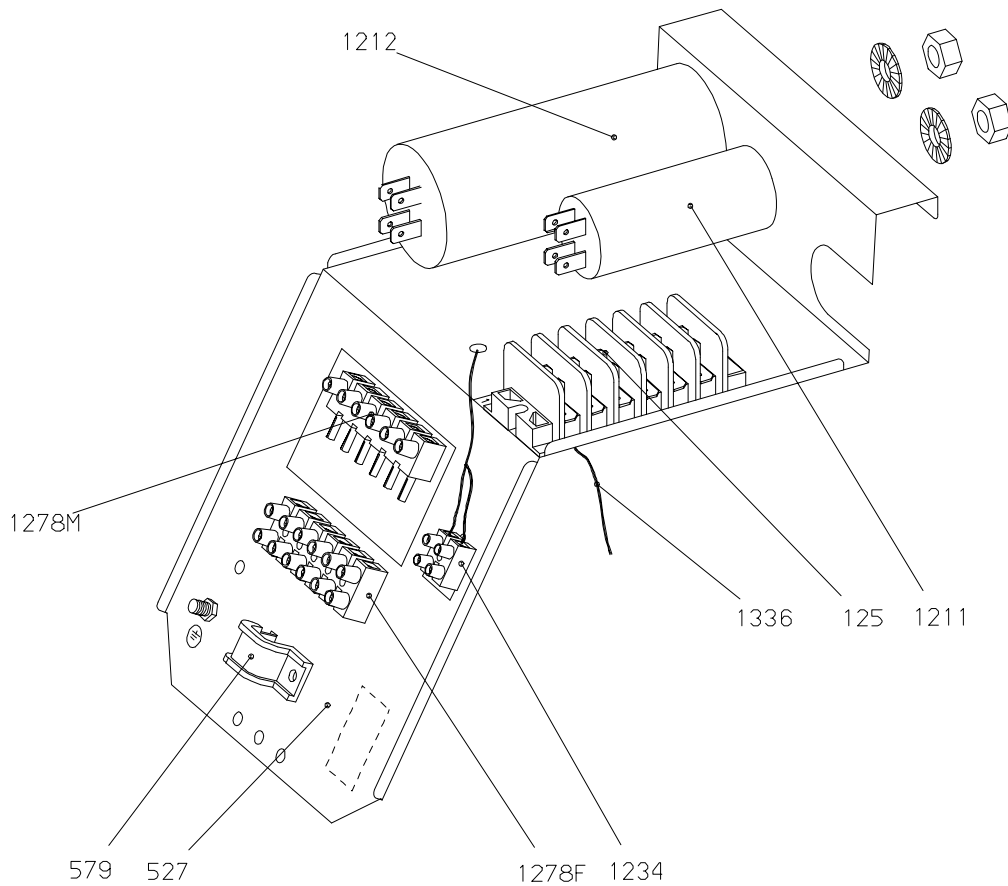


FIG.#3 -ELECTRICAL ASSEMBLY - CUE-15,20,30,40

PRODUCT GROUP NO. 8011/8303

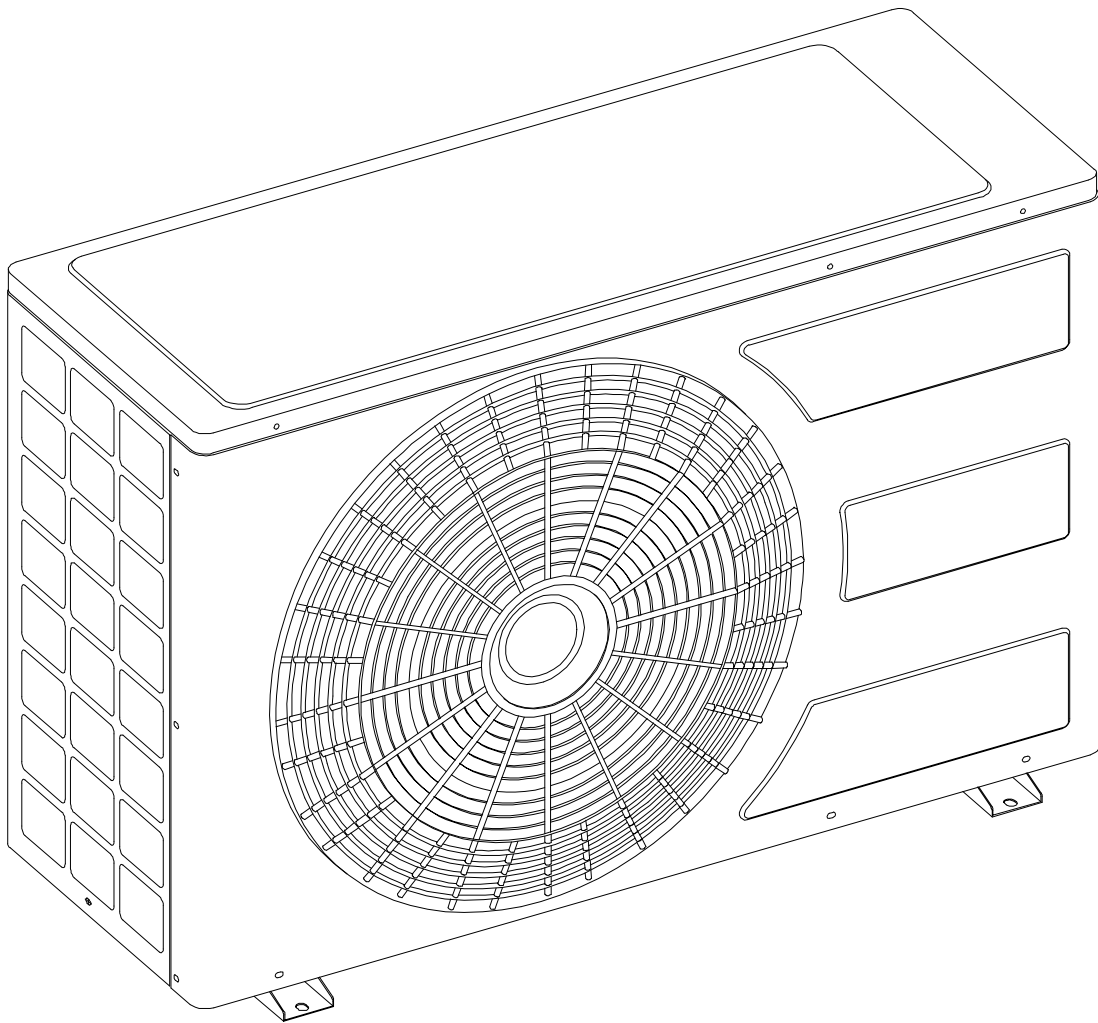
FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8011/8303-0

ILLUSTRATED PARTS BREAKDOWN SPLIT AIR-CONDITIONER

MODEL: CUE 45,50,55,60,80

PRODUCT GROUP NO. CUE45 - 8361
CUE50 - 8243,8304,8364,8410,8437
CUE55 - 8305
CUE60 - 8212,8244,8245,8306,8362,
8401,8411,8412,8421,8438,8441
CUE80 - 8213,8246,8321,8419



8212/8441-00

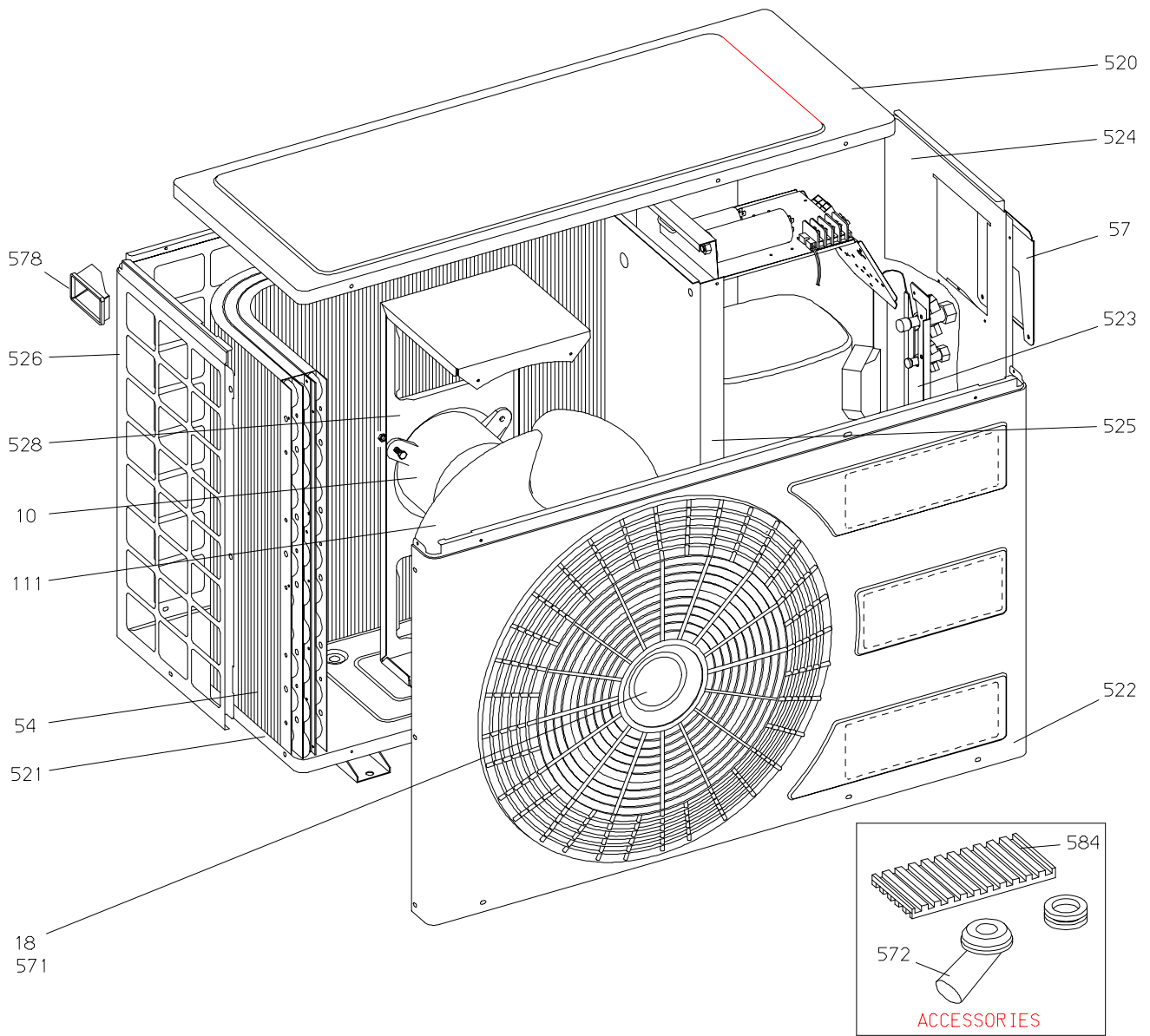


FIG.#1 -GENERAL ASSEMBLY - CUE-45,50,55,60,80

PRODUCT GROUP NO. 8212/8441

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8212/8441-01

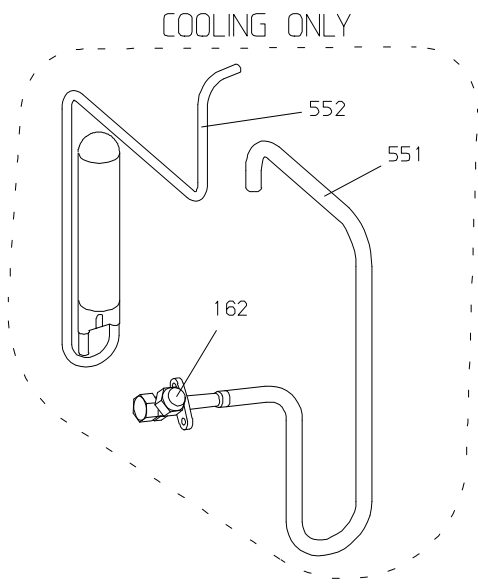
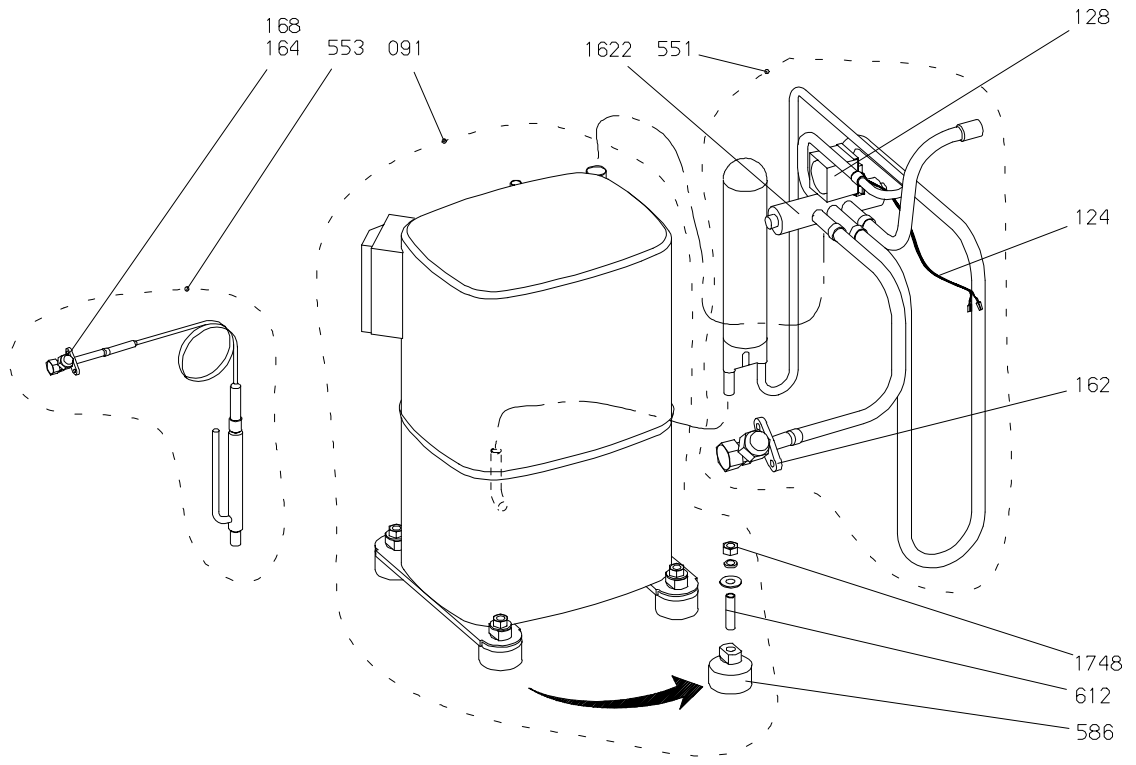


FIG.#2 -REFRIGERATION - CUE-45,50,55,60,80

PRODUCT GROUP NO. 8212/8441

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8212/8441-02

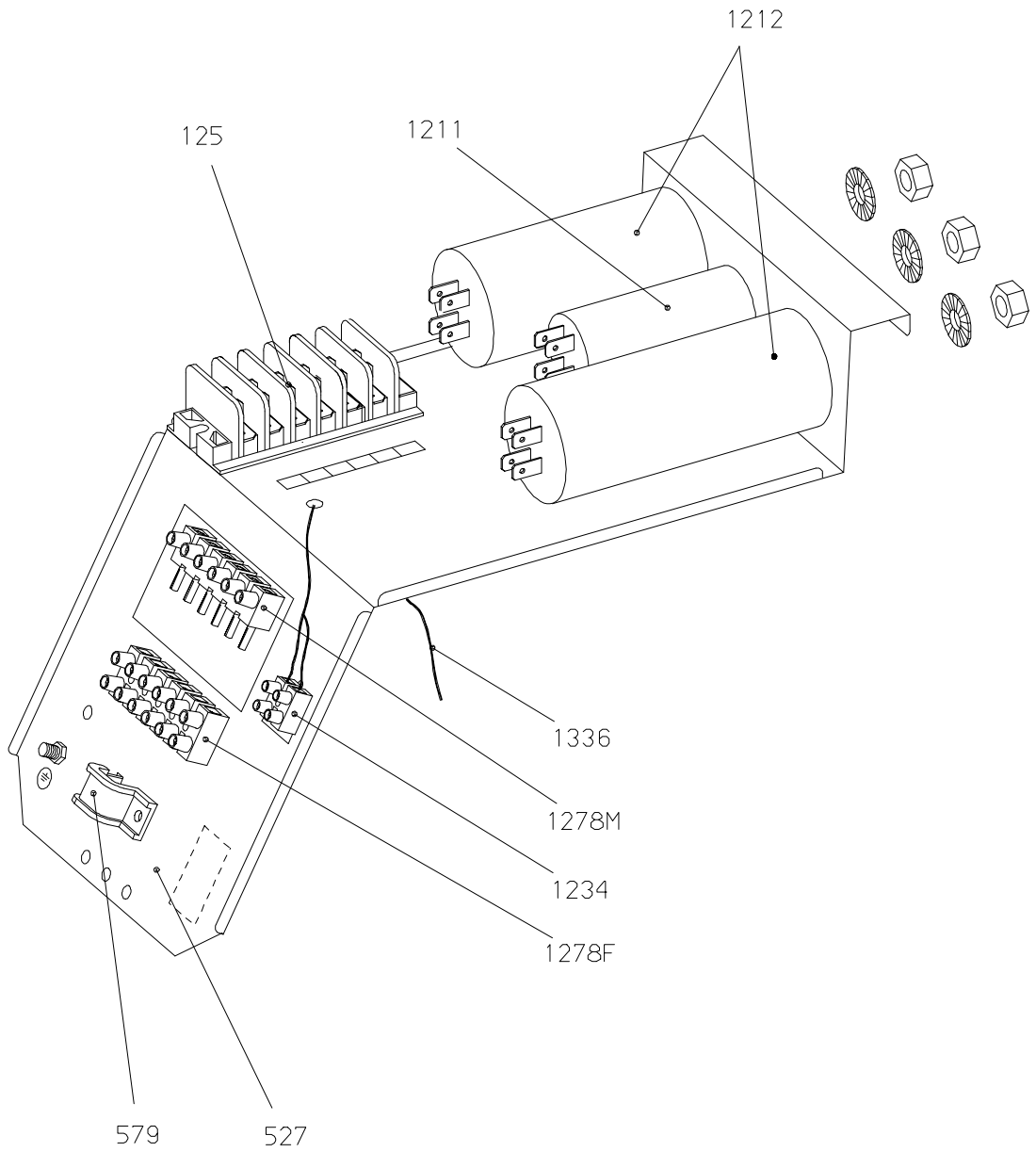


FIG.#3 -ELECTRICAL ASSEMBLY - CUE-45,50,55,60,80

PRODUCT GROUP NO. 8212/8441

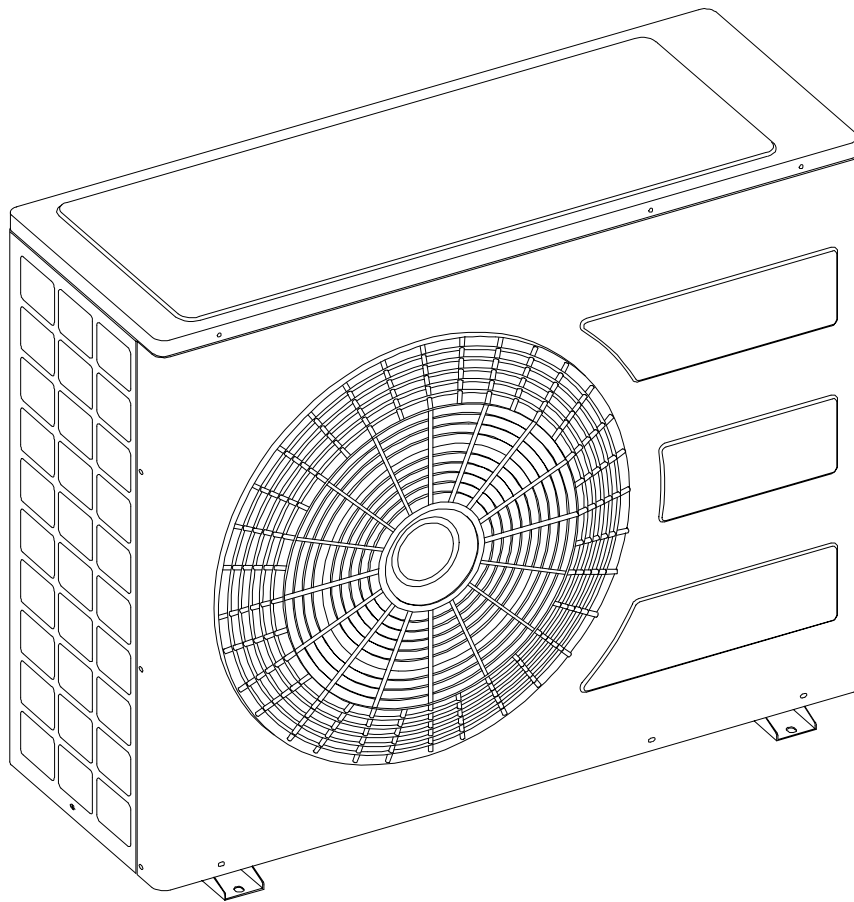
FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8212/8441-03

ILLUSTRATED PARTS BREAKDOWN SPLIT AIR-CONDITIONER

MODEL: CUE 85,90,100

PRODUCT GROUP No. CUE85 - 8402,8422,8442
CUE90 - 8214,8247,8311,8363,8406,
8423,8439,8443
CUE100 - 8403,8420,8428



8214/8443-00

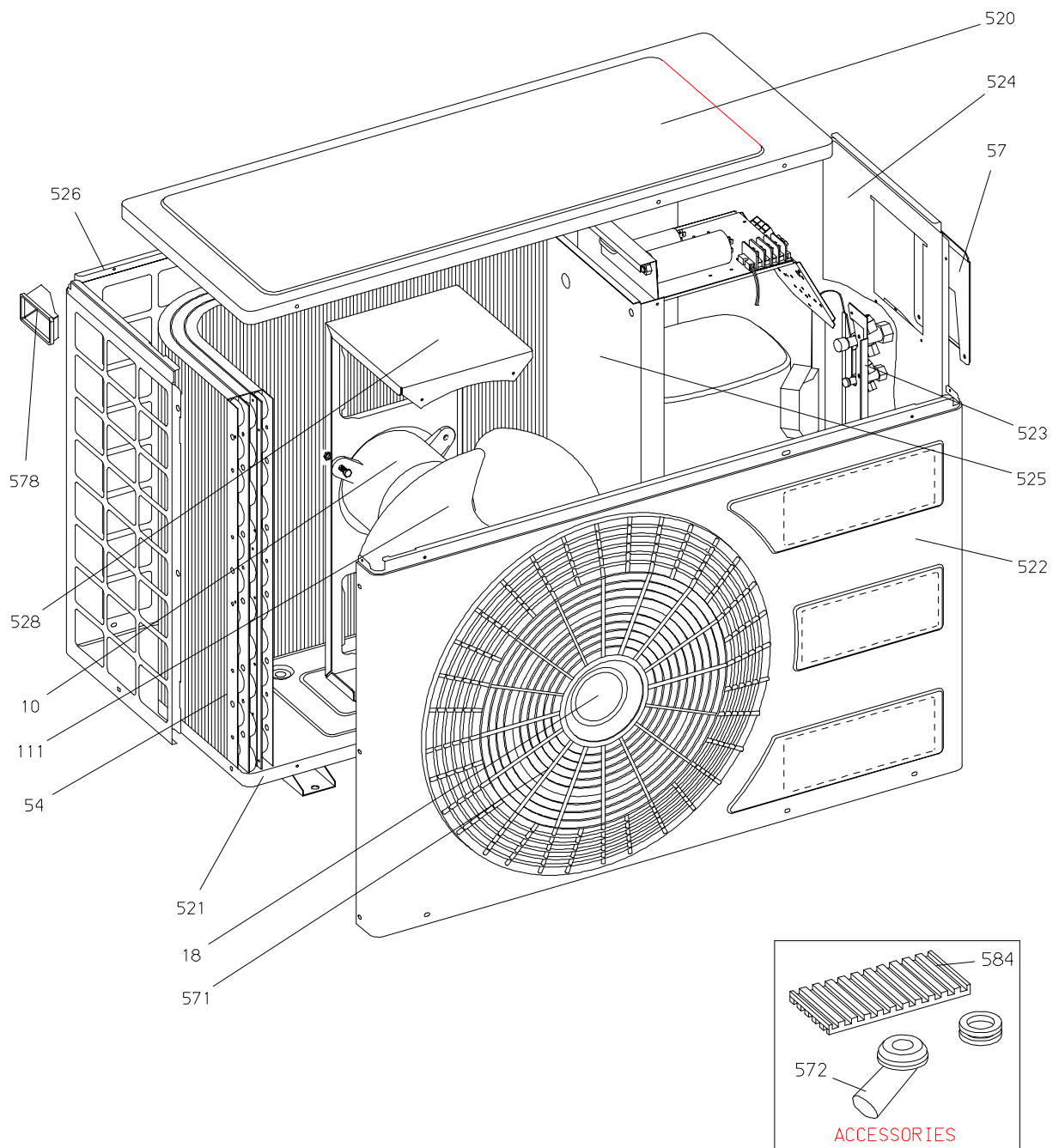


FIG.#1 - GENERAL ASSEMBLY- CUE85,90,100

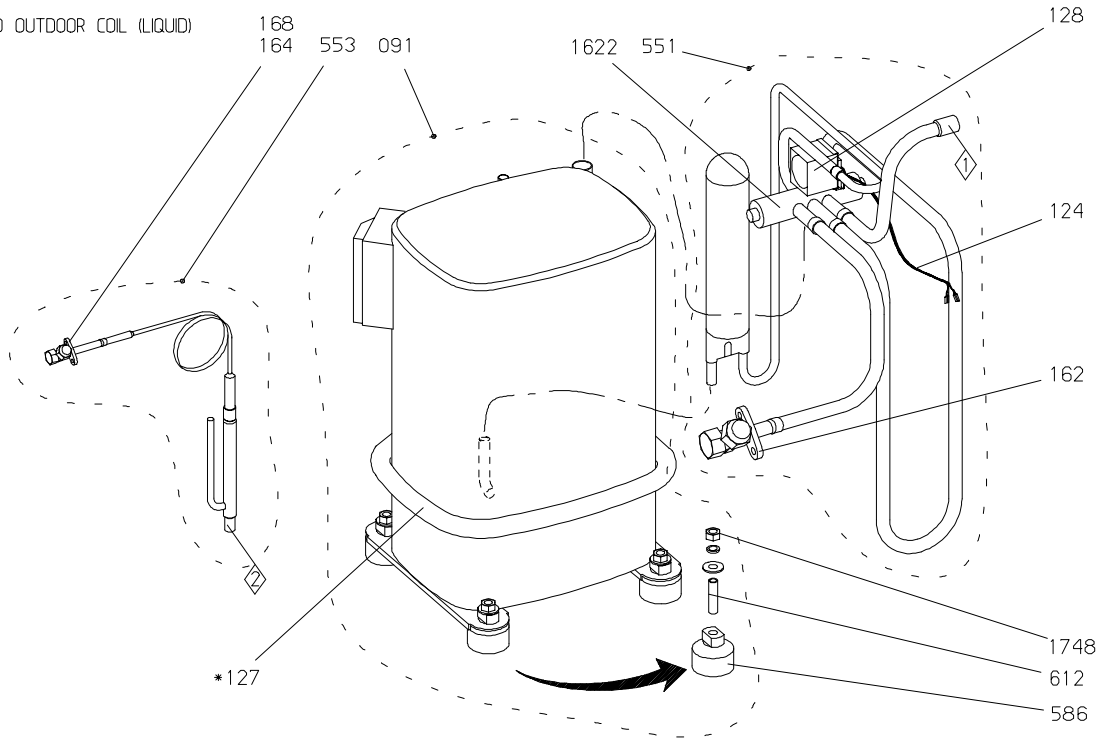
PRODUCT GROUP NO. 8214/8443

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8214/8443-01

◇ TO OUTDOOR COIL (SUCTION)

◇ TO OUTDOOR COIL (LIQUID)



COOLING ONLY

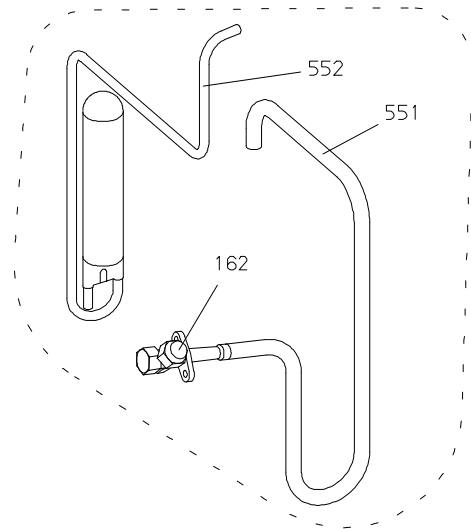


FIG.#2 - REFRIGERATION- CUE85,90,100

PRODUCT GROUP NO. 8214/8443

* OPTIONAL ONLY FOR SH MODELS

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER
TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8214/8443-02

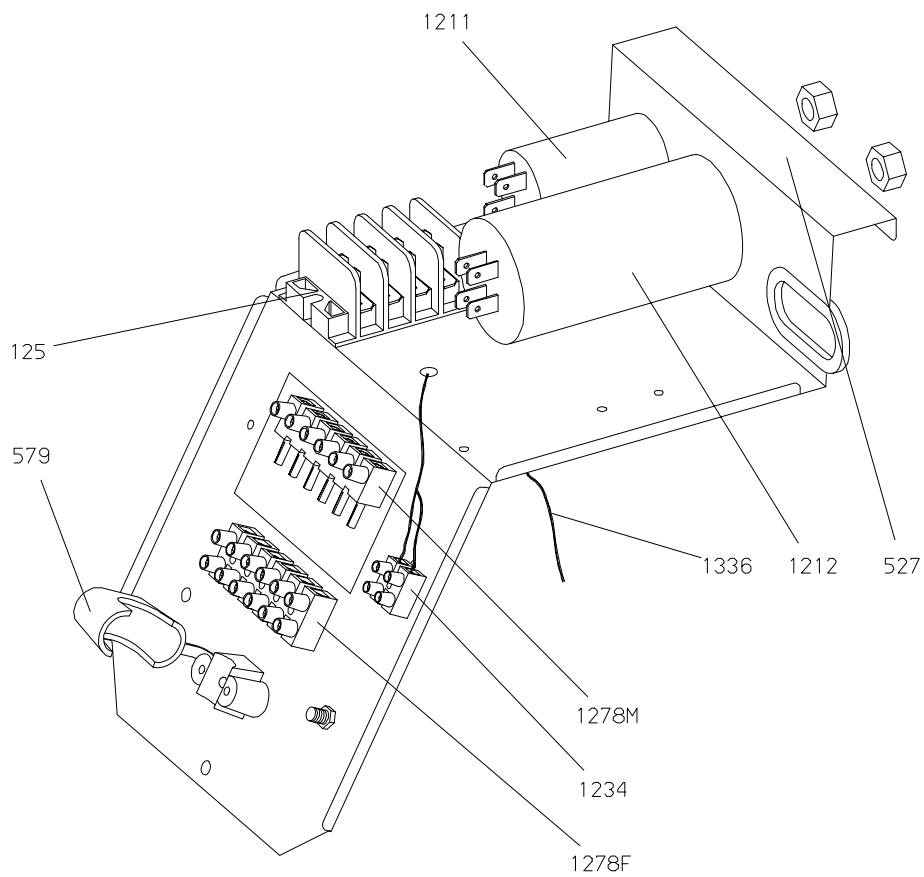


FIG.#3 - ELECTRICAL ASSEMBLY- CUE85,90,100

PRODUCT GROUP NO. 8214/8443

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

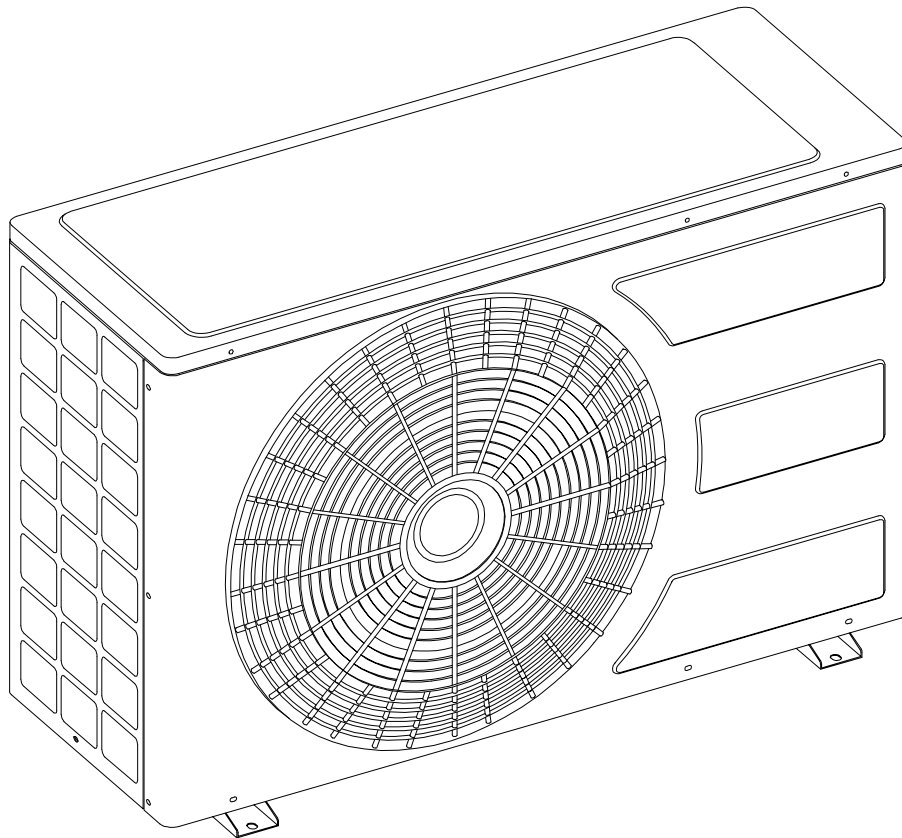
8214/8443-03

ILLUSTRATED PARTS BREAKDOWN

SPLIT AIR-CONDITIONER

MODEL: CUE 1515,2020,2030,3030,4040

PRODUCT GROUP NO. CUE1515 - 8354
CUE2020 - 8357
CUE2030 - 8358
CUE3030 - 8359
CUE4040 - 8360



8354/60-00

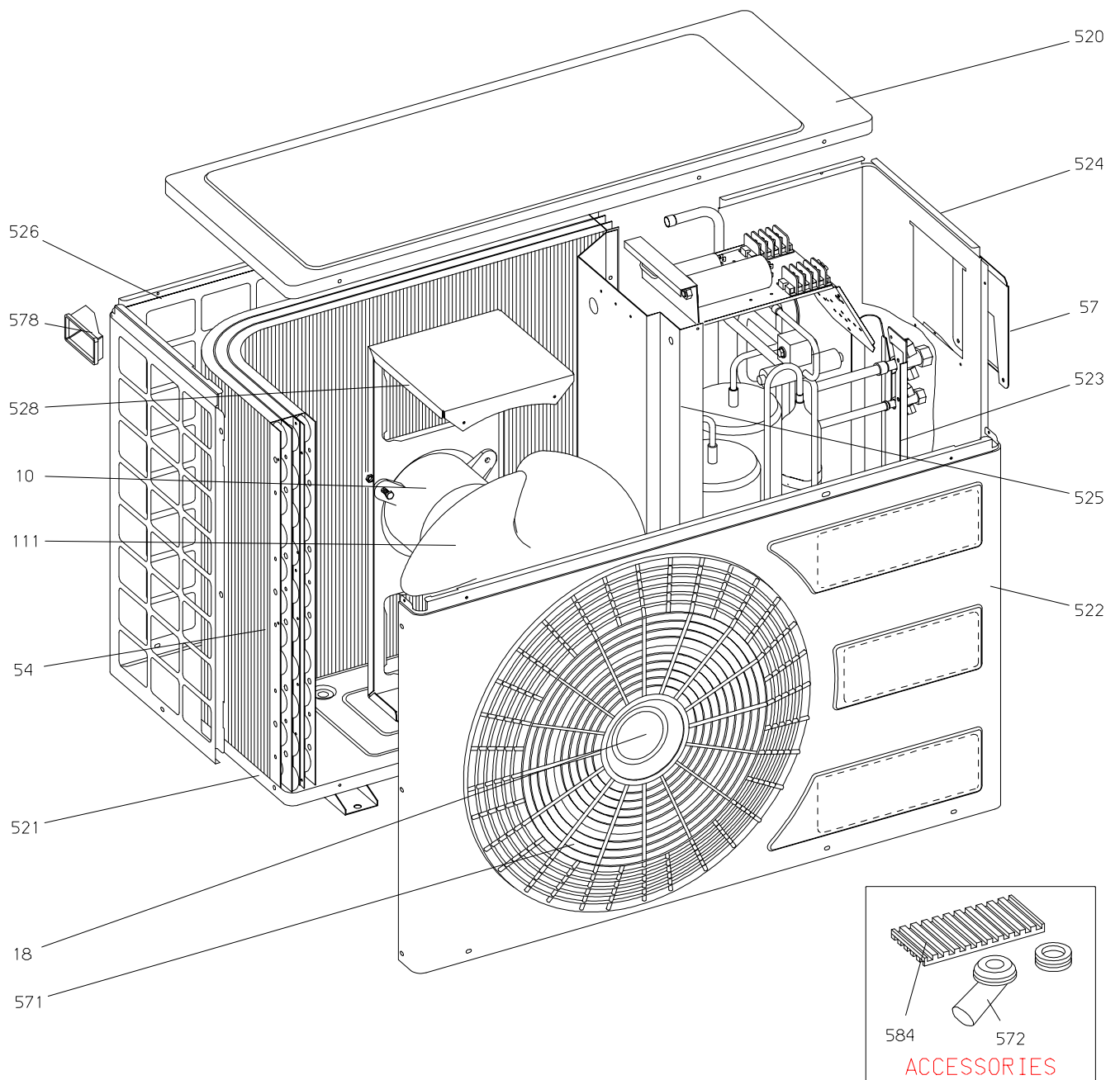


FIG.#1 -GENERAL ASSEMBLY- CUE-1515,2020,2030,3030,4040

PRODUCT GROUP NO. 8354/57/58/59/60

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8534-60/01

- ◇ TO OUTDOOR COIL (SUCTION)
- ◇ TO OUTDOOR COIL (LIQUID)

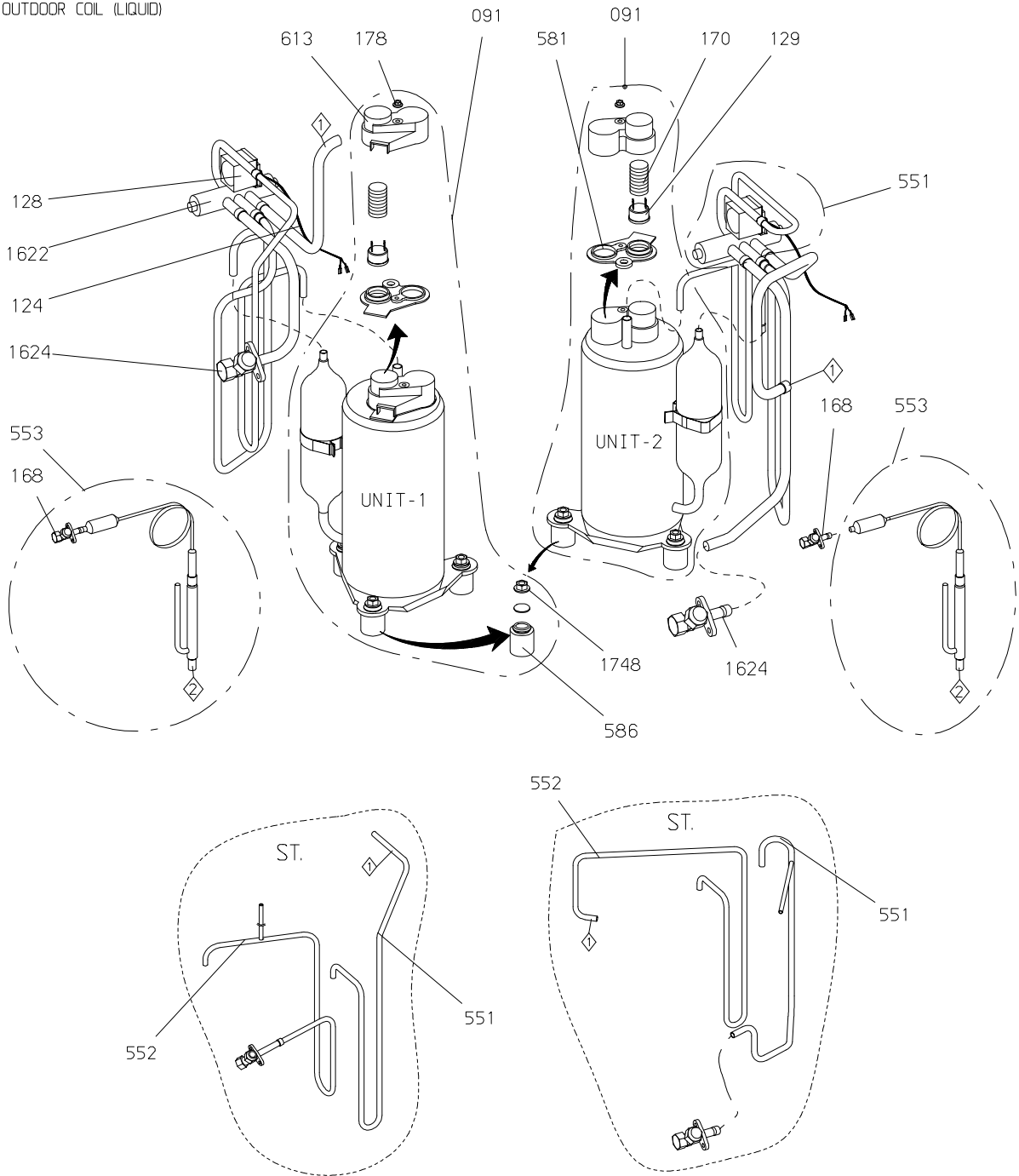


FIG.#2 -REFRIGERATION- CUE-1515,2020,2030,3030,4040

PRODUCT GROUP NO. 8354/57/58/59/60

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8534-60/02

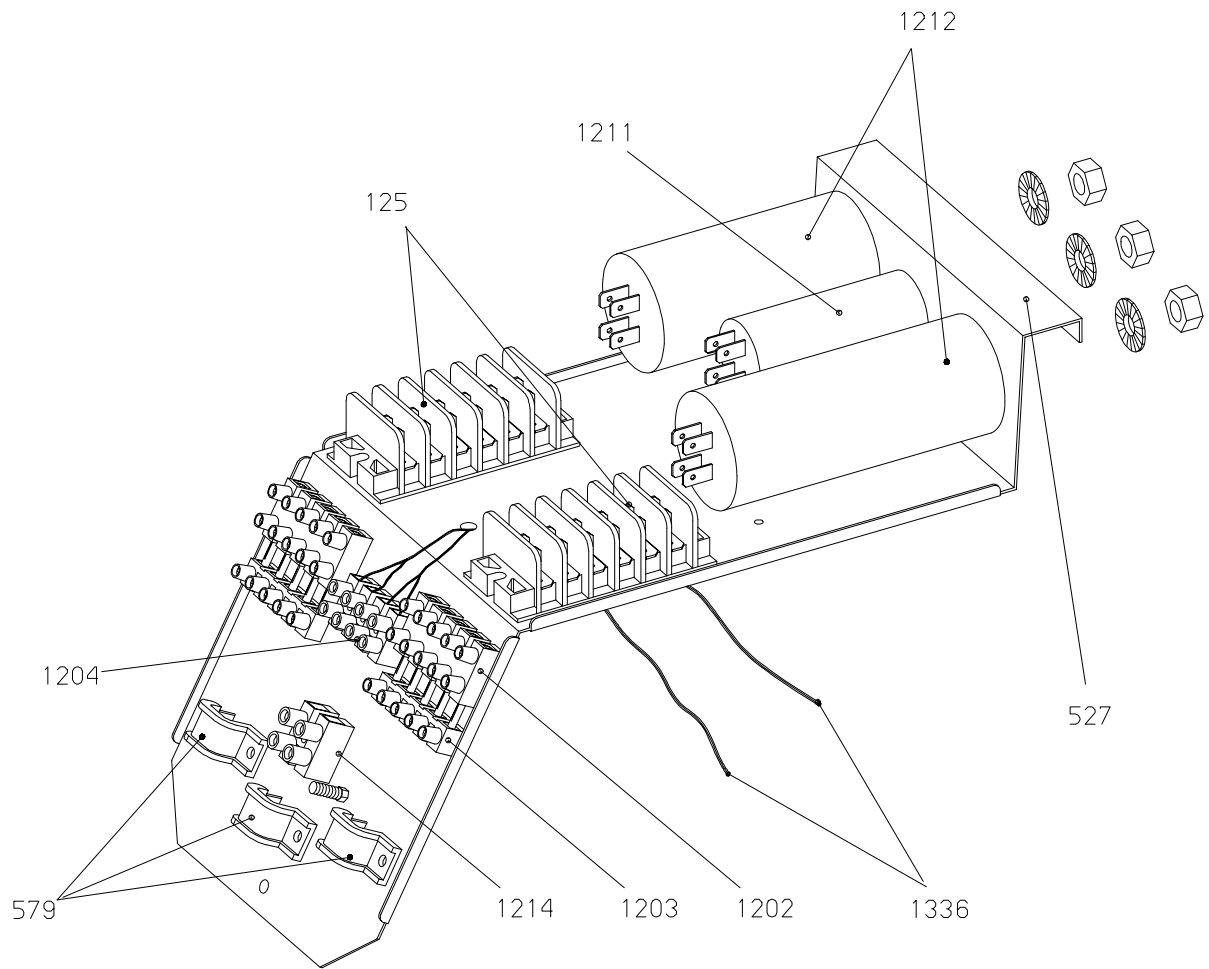


FIG.#3 -ELECTRICAL ASSEMBLY- CUE-1515,2020,2030,3030,4040

PRODUCT GROUP NO. 8354/57/58/59/60

FOR COMPONENTS DESCRIPTION AND CATALOG NUMBERS REFER TO SPARE PARTS LIST FOR THE RELEVANT PRODUCT NO.

8534-60/03