



HOSHIZAKI AMERICA, INC.

SERVICE BULLETIN

SB94-0006

May 9, 1994

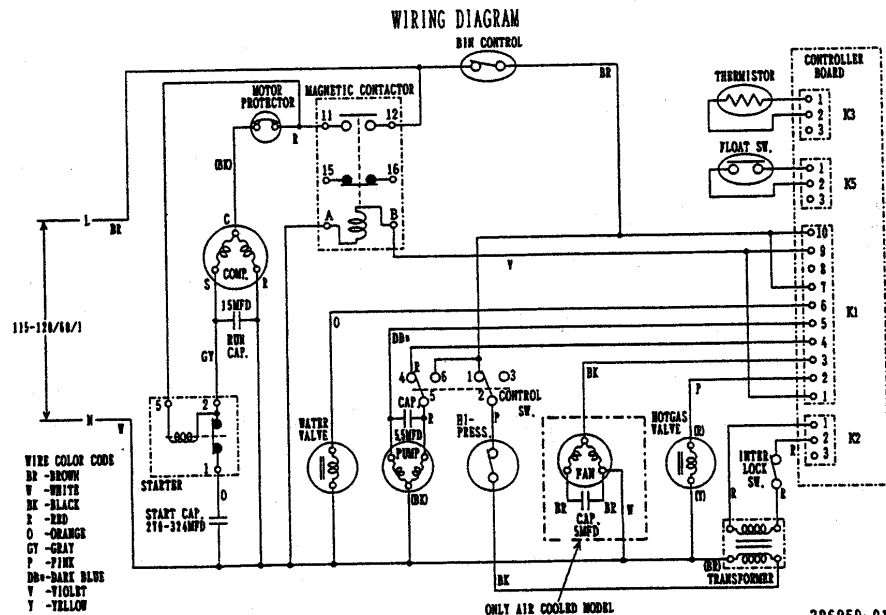
SUBJECT: SERVICE INFORMATION FOR R-22 UNITS

Utilize the following wiring diagrams and performance data to trouble shoot the new R-22 units.

KM-250MAE, MWE
KM-1600SWE, SWE3
KM-1600SRE, SRE3
KM-2000SRE3

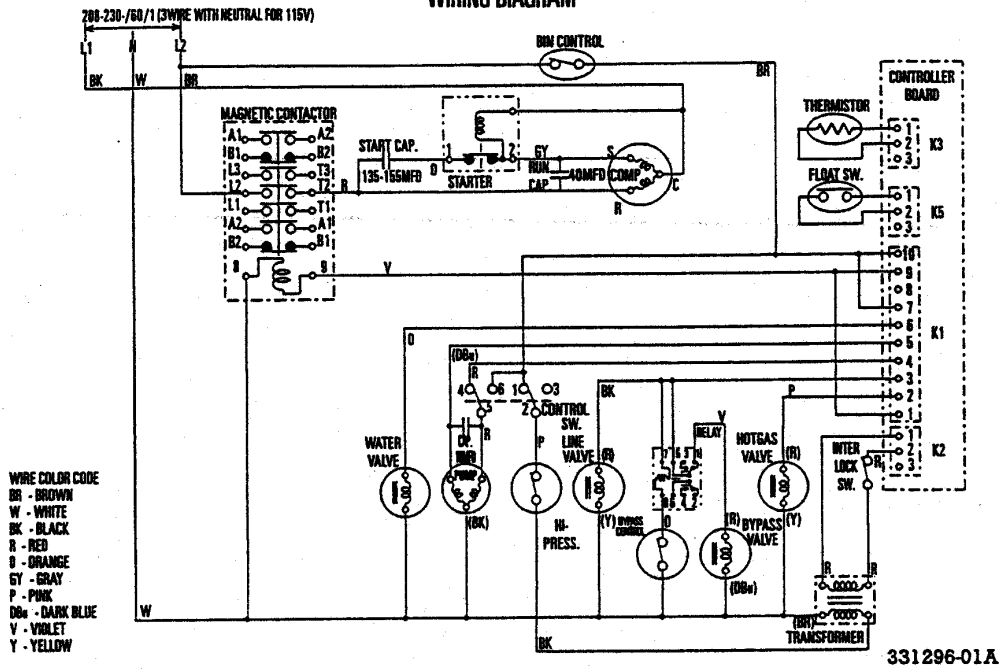
DM/ss

KM-250MAE, MWE



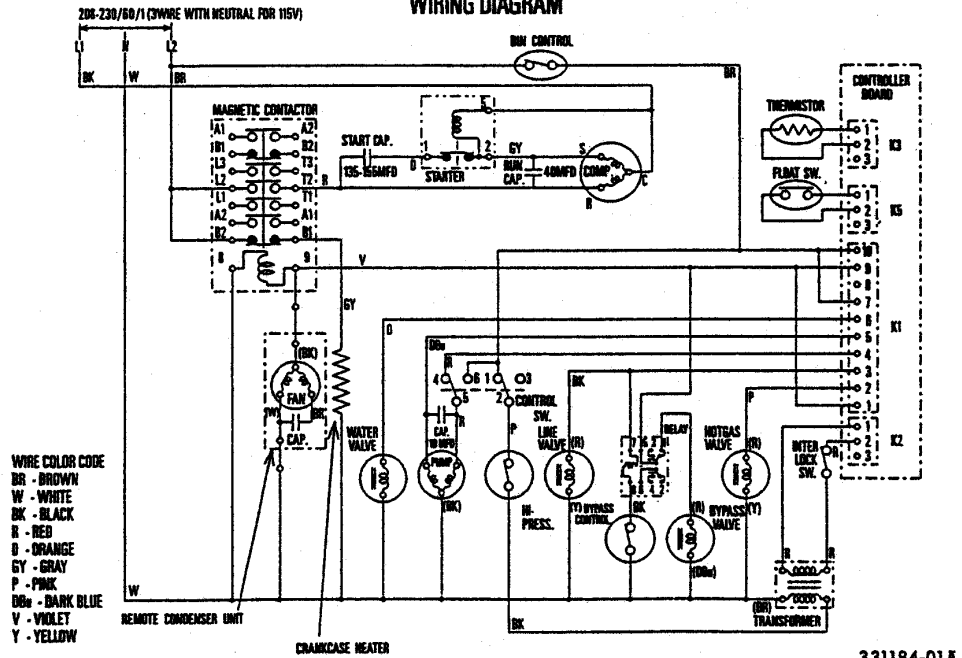
KM-1600SWE

WIRING DIAGRAM



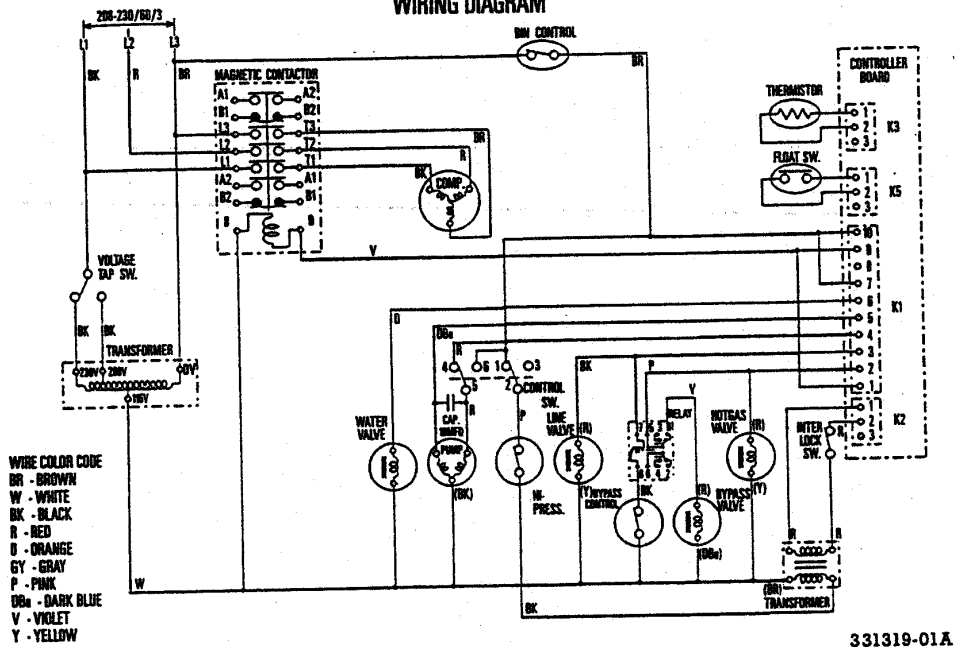
KM-1600SRE

WIRING DIAGRAM



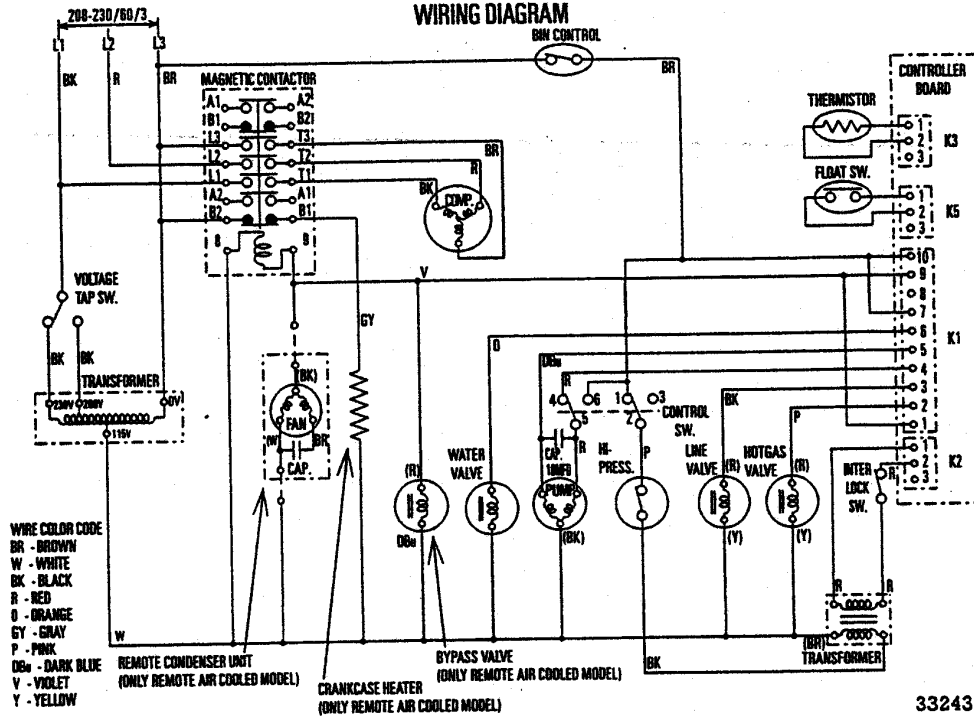
KM-1600SWB3

WIRING DIAGRAM



KM-2000SRE3

WIRING DIAGRAM



332437-01A

ITEM HOSHIZAKI MODULAR CRESCENT CUBER
MODEL KM-250MFB

APPROXIMATE ICE PRODUCTION PER 24 HR. (MAX. CUBE SIZE)	
lbs./day (kg/day)	
APPROXIMATE ELECTRIC CONSUMPTION	
watts	
APPROXIMATE WATER CONSUMPTION PER 24 HR.	
gal./day (ml/day)	
FREEZING CYCLE TIME	
min.	
HARVEST CYCLE TIME	
min.	
HEAD PRESSURE	
PSIG (kg/cm ² G)	
SUCTION PRESSURE	
PSIG (kg/cm ² G)	

Ambient Temp. (°F)	Water Temp. (°F)	
	50	70
70	* 224(102)	210(95)
80	213(97)	202(92)
90	204(93)	* 193(88)
100	196(89)	188(85)
70	* 784	785
80	785	* 788
90	785	792
100	786	
70	316(1.20)	340(1.29)
80	320(1.21)	350(1.33)
90	340(1.29)	370(1.40)
100	360(1.36)	380(1.44)
70	23	23
80	23	24
90	25	25
100	25	26
70	3.5	3.5
80	3.5	3.5
90	3.5	3.5
100	3.5	3.5
70	233(16.3)	236(16.5)
80	234(16.4)	236(16.5)
90	236(16.5)	237(16.6)
100	236(16.5)	237(16.6)
70	40(2.8)	43(3.0)
80	40(2.8)	43(3.0)
90	41(2.9)	47(3.3)
100	41(2.9)	47(3.3)

ITEM HOSHIZAKI MODULAR CRESCENT CUBER
MODEL KM-250MAB

Ambient Temp. (°F)	Water Temp. (°F)	
	50	70
70	* 242(110)	222(101)
80	208(94)	191(87)
90	178(81)	* 184(83)
100	147(67)	140(64)
70	* 980	970
80	960	965
90	960	* 958
100	960	968
70	99(0.38)	85(0.32)
80	72(0.27)	68(0.26)
90	69(0.26)	49(0.19)
100	64(0.24)	45(0.17)
70	24	26.5
80	28	33
90	33	33
100	41	43
70	3.0	3.0
80	3.0	3.0
90	3.0	2.0
100	3.0	2.0
70	242(17.0)	245(17.2)
80	271(19.0)	274(19.2)
90	304(21.3)	306(21.6)
100	331(23.2)	340(23.8)
70	39(2.7)	39(2.7)
80	40(2.8)	40(2.8)
90	43(3.0)	43(3.0)
100	46(3.2)	46(3.2)

TOTAL HEART OF REJECTION

5450BTU/h (AT 90 °F/WT 70 °F)

Note:

Pressure data is recorded first 5 minutes in freezing cycle.
This data does not include the case which is drained by the pump in each cycle.
The data without *marks should be used for reference.

5250 BTU/h (AT 90 °F/WT 70 °F)

1010 BTU/h (AT 90 °F/WT 70 °F)

40 gal./h (AT 100 °F/WT 70 °F)

less than 10 PSIG

HEART OF REJECTION FROM
CONDENSER

HEART OF REJECTION FROM
COMPRESSOR

WATER FLOW FOR CONDENSER

PRESSURE DROP OF COOLING
WATER LINE

ITEM HOSHIZAKI STACKABLE CRESCENT CUBER
MODEL KM-1600SRE

	Ambient Temp. (°F)	Water Temp. (°F)	
		50	70
APPROXIMATE ICE PRODUCTION PER 24 HR. MAX. CUBE SIZE)	70	1520(689)	1465(665)
	80	1510(685)	1455(660)
	90	1500(680)	1445(655)
	100	1480(671)	1425(646)
lbs./day (kg/day)			
APPROXIMATE ELECTRIC CONSUMPTION	70	2812	2800
	80	2812	2800
	90	2812	2800
	100	2812	2800
watts			
APPROXIMATE WATER CONSUMPTION PER 24 HR.	70	1605(6.08)	1790(6.78)
	80	1590(6.01)	1800(6.83)
	90	1480(5.61)	1821(6.90)
	100	1380(5.23)	1900(7.20)
gal./day (m ³ /day)			
FREEZING CYCLE TIME	70	23	27
	80	24	27.5
	90	24.5	27.5
	100	25	28
min.			
HARVEST CYCLE TIME	70	5.5	3
	80	5	3
	90	5	3
	100	5	3
min.			
HEAD PRESSURE	70	235(16.5)	235(16.5)
	80	235(16.5)	235(16.5)
	90	235(16.5)	235(16.5)
	100	235(16.5)	235(16.5)
PSIG (kg/cm ² G)			
SUCTION PRESSURE	70	36(2.5)	36(2.5)
	80	36(2.5)	36(2.5)
	90	36(2.5)	36(2.5)
	100	36(2.5)	36(2.5)
PSIG (kg/cm ² G)			

HEAT OF REJECTION FROM CONDENSER 24393 BTU/h (AT 90°F/WT 70°F, URC-20C)

HEAT OF REJECTION FROM COMPRESSOR 3686 BTU/h (AT 90°F/WT 70°F)

WATER FLOW FOR CONDENSER 154 gal./h (AT 100°F/WT 90°F)

PRESSURE DROP OF COOLING WATER LINE less than 10 PSIG

Note: Pressure data is recorded first 5 minutes in freezing cycle. The data without marks should be used for reference.

ITEM HOSHIZAKI STACKABLE CRESCENT CUBER
MODEL KM-1600SRE

	Ambient Temp. (°F)	Water Temp. (°F)	
		50	70
APPROXIMATE ICE PRODUCTION PER 24 HR. MAX. CUBE SIZE)	70	1540(699)	1500(680)
	80	1500(680)	1430(648)
	90	1440(653)	1360(617)
	100	1340(608)	1240(562)
lbs./day (kg/day)			
APPROXIMATE ELECTRIC CONSUMPTION	70	2900	2880
	80	2960	3000
	90	3040	3151
	100	3250	3280
watts			
APPROXIMATE WATER CONSUMPTION PER 24 HR.	70	779(2.95)	490(1.82)
	80	653(2.47)	455(1.72)
	90	555(2.10)	424(1.61)
	100	485(1.84)	370(1.40)
gal./day (m ³ /day)			
FREEZING CYCLE TIME	70	23	26
	80	24	27
	90	26	28.5
	100	28	32
min.			
HARVEST CYCLE TIME	70	5	3
	80	5	3
	90	4	3
	100	4	3
min.			
HEAD PRESSURE	70	199(14.0)	199(14.0)
	80	216(15.2)	220(15.5)
	90	239(16.8)	242(17.0)
	100	277(19.5)	282(19.8)
PSIG (kg/cm ² G)			
SUCTION PRESSURE	70	33(2.3)	33(2.3)
	80	33(2.3)	33(2.3)
	90	34(2.4)	36(2.5)
	100	37(2.6)	38(2.7)
PSIG (kg/cm ² G)			

HEAT OF REJECTION FROM CONDENSER 23749 BTU/h (AT 90°F/WT 70°F, URC-20E)

HEAT OF REJECTION FROM COMPRESSOR 4068 BTU/h (AT 90°F/WT 70°F)

CONDENSER VOLUME 214 cu. in. (URC-20E)

Note: Pressure data is recorded first 5 minutes in freezing cycle. The data without marks should be used for reference.

ITEM HOSHIZAKI STACKABLE CRESCENT CUBER
MODEL KM-1600SRE3

	Ambient Temp. (°F)	Water Temp. (°F)	
		50	70
APPROXIMATE ICE PRODUCTION PER 24 HR. (MAX. CUBE SIZE)	70 80 90 100	*1520(688) 1510(685) 1500(680) 1480(671)	1465(665) 1455(660) 1445(655) 1425(646)
lbs./day (kg/day)			2600 2600 2600 2600
APPROXIMATE ELECTRIC CONSUMPTION	70 80 90 100	*2540 2540 2540 2540	2535 2535 2535 2535
watts			2600 2600 2600 2600
APPROXIMATE WATER CONSUMPTION PER 24 HR.	70 80 90 100	1605(6.08) 1580(6.00) 1560(5.91) 1560(5.91)	1810(6.86) 1815(6.88) 1821(6.90) 1850(7.01)
gal./day (m ³ /day)			3260(12.4) 3280(12.4) 3300(12.5) 3400(12.8)
FREEZING CYCLE TIME	70 80 90 100	23 24 24.5 25	27 27.5 27.5 28
min.			31.5 31.5 31.5 32
HARVEST CYCLE TIME	70 80 90 100	5.5 5 5 5	3 3 3 3
min.			3 3 3 3
HEAD PRESSURE	70 80 90 100	235(16.5) 235(16.5) 235(16.5) 235(16.5)	235(16.5) 235(16.5) 236(16.6) 236(16.6)
PSIG (kg/cm ² G)			249(17.5) 250(17.6) 252(17.7) 253(17.8)
SUCTION PRESSURE	70 80 90 100	36(2.5) 36(2.5) 36(2.5) 36(2.5)	36(2.5) 36(2.5) 37(2.6) 37(2.6)
PSIG (kg/cm ² G)			37(2.6) 38(2.7) 38(2.7) 40(2.8)

HEAT OF REJECTION FROM CONDENSER 24393 BTU/h (AT 90 °F/WT 70 °F)

HEAT OF REJECTION FROM COMPRESSOR 3686 BTU/h (AT 90 °F/WT 70 °F)

WATER FLOW FOR CONDENSER 164 gal./h (AT 100 °F/WT 90 °F)

PRESSURE DROP OF COOLING WATER LINE Less than 10 PSIG

Note: Pressure data is recorded first 5 minutes in freezing cycle. The data without marks should be used for reference.

ITEM HOSHIZAKI STACKABLE CRESCENT CUBER
MODEL KM-1600SRE3

	Ambient Temp. (°F)	Water Temp. (°F)	
		50	70
APPROXIMATE ICE PRODUCTION PER 24 HR. (MAX. CUBE SIZE)	70 80 90 100	*1540(699) 1500(680) 1440(653) 1340(608)	1500(680) 1440(653) 1380(617) 1240(582)
lbs./day (kg/day)			2730 2730 2920 3060
APPROXIMATE ELECTRIC CONSUMPTION	70 80 90 100	*2624 2700 2830 2960	2680 2730 2880 3020
watts			2730 2770 2920 3060
APPROXIMATE WATER CONSUMPTION PER 24 HR.	70 80 90 100	779(2.95) 853(2.47) 555(2.10) 485(1.84)	480(1.82) 455(1.72) 424(1.61) 370(1.40)
gal./day (m ³ /day)			420(1.59) 400(1.52) 370(1.40) 330(1.25)
FREEZING CYCLE TIME	70 80 90 100	23 24 26 28	26 27 28.5 32
min.			29 30 32 36
HARVEST CYCLE TIME	70 80 90 100	5 5 4 4	3 3 3 3
min.			3 3 3 3
HEAD PRESSURE	70 80 90 100	199(14.0) 216(13.2) 239(16.8) 277(19.5)	199(14.0) 220(15.5) 242(17.0) 282(19.8)
PSIG (kg/cm ² G)			199(14.0) 225(15.8) 245(17.2) 284(20.0)
SUCTION PRESSURE	70 80 90 100	33(2.3) 33(2.3) 34(2.4) 37(2.6)	33(2.3) 33(2.3) 34(2.4) 37(2.6)
PSIG (kg/cm ² G)			34(2.4) 34(2.4) 36(2.5) 38(2.7)

HEAT OF REJECTION FROM CONDENSER 23749 BTU/h (AT 90 °F/WT 70 °F, URC-20E)

HEAT OF REJECTION FROM COMPRESSOR 4058 BTU/h (AT 90 °F/WT 70 °F)

CONDENSER VOLUME 214 cu. in. (URC-20E)

Note: Pressure data is recorded first 5 minutes in freezing cycle. The data without marks should be used for reference.

PERFORMANCE DATA

ITEM HOSHIZAKI STACKABLE CRESCENT CUBER
MODEL KM-2000SRE3

APPROXIMATE ICE PRODUCTION PER 24 HR. (MAX. CUBE SIZE)	Ambient	Water Temp. (°F)		
	Temp. (°F)	50	70	90
lbs./day (kg/day)	70	*1905(864)	1900(862)	1820(826)
	80	1860(844)	1905(864)	1750(794)
	90	1820(826)	*1733(786)	1600(726)
	100	1740(790)	1650(748)	1500(680)
APPROXIMATE ELECTRIC CONSUMPTION	70	*3334	3350	3400
	80	3380	3430	3460
	90	3420	*3547	3560
	100	3530	3560	3580
APPROXIMATE WATER CONSUMPTION PER 24 HR.	70	756(2.87)	420(1.59)	430(1.63)
	80	705(2.67)	410(1.55)	415(1.57)
	90	650(2.46)	367(1.39)	375(1.42)
	100	570(2.16)	325(1.23)	315(1.19)
FREEZING CYCLE TIME	70	32	32.5	33
	80	32.5	33	34
	90	33	33.5	36.5
	100	35	36.5	39
HARVEST CYCLE TIME	70	5.5	3.5	3.5
	80	5.5	3.5	3.5
	90	5.5	3.5	3.5
	100	5.5	3.5	3.5
HEAD PRESSURE	70	200(14.0)	200(14.0)	200(14.0)
	80	219(15.3)	221(15.5)	227(15.9)
	90	221(15.5)	250(17.5)	256(17.9)
	100	279(19.5)	281(19.7)	286(20.0)
SUCTION PRESSURE	70	37(2.6)	39(2.7)	39(2.7)
	80	37(2.6)	39(2.7)	40(2.8)
	90	39(2.7)	39(2.7)	41(2.9)
	100	40(2.8)	41(2.9)	46(3.2)
HEAT OF REJECTION FROM CONDENSER	27270 BTU/h (AT 90°F/WT 70°F, URC-20E)			
HEAT OF REJECTION FROM COMPRESSOR	3680 BTU/h (AT 90°F/WT 70°F)			
CONDENSER VOLUME	214 cu. in. (URC-20E)			

Note: Pressure data is recorded first 5 minutes in freezing cycle.
The data without *marks should be used for reference.