KeepRite® REFRIGERATION

KTL Two-Way Low Profile Evaporators

PRODUCT DATA & INSTALLATION

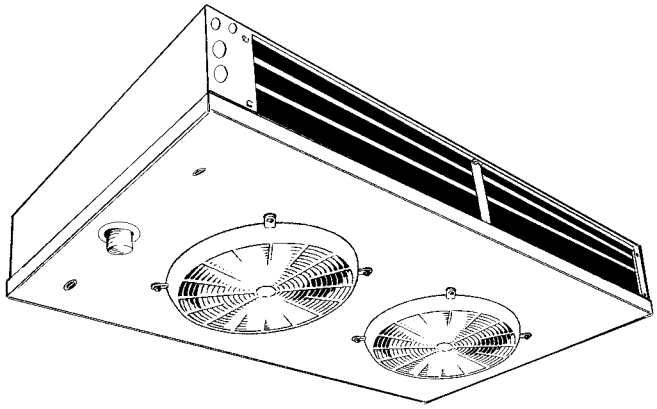
Bulletin K30-KTL-PDI-17e
Part # 1087830

PRODUCT SUPPORT
web: **www.k-rp.com/ktl**
email: **evaps@k-rp.com**
call: **1-844-893-3222 x520**
scan:

High, Medium and Low Temperature Applications -10°F (*-23.3 °C*) or Above Box Temperature

60 Hz

Air, Electric or Hot Gas Defrost (Reverse Cycle)

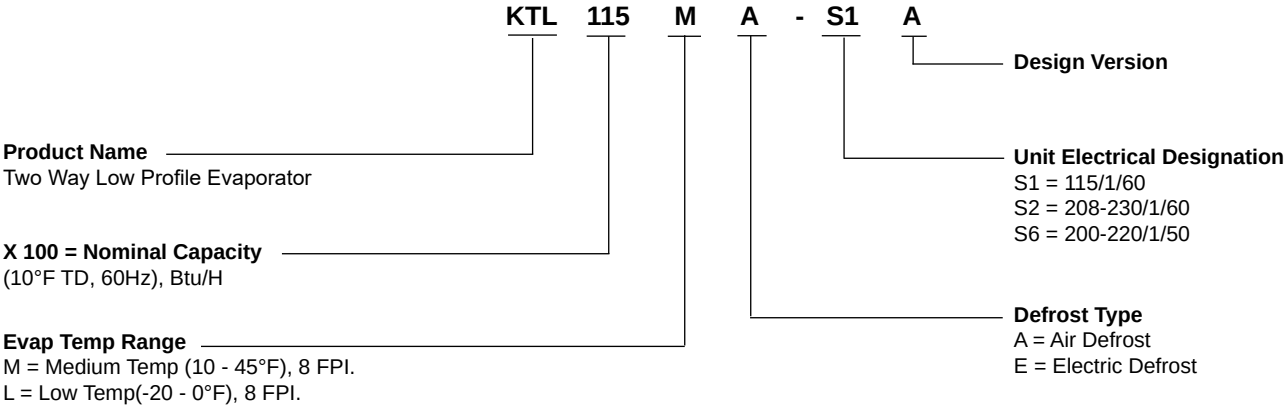


INCLUDES RATINGS FOR LOW GWP REFRIGERANTS

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NOMENCLATURE



STANDARD FEATURES

- Compatible with Low GWP Refrigerants
- Low height compact size maximizes usable storage space
- Dual refrigeration coils and two-way air distribution reduces air velocities to minimize product dehydration
- Air enters through fan and discharges two ways out of each coil side
- Rugged heavy duty motor mount reduces vibration and noise
- Electric defrost models include factory installed defrost termination and fan delay thermostat
- NSF approved “flush to ceiling mount”
- Internally enhanced tube

AVAILABLE OPTIONS

- EC Motors available for Medium Temperature models 038, 060, 077 & 115 and
  Low Temperature models 033, 052, 066 & 099
- Additional options available, please contact factory

MEDIUM TEMPERATURE MODELS - CAPACITY *

Model KTL			010M	015M	020M	025M	032M	038M	060M	077M	115M
Number of Fans			1	1	1	1	1	1	2	2	3
Capacity BTUH *(WATTS)*	Evap Temp. 25°F *(-4°C)*	R407A R448A	900 *(264)*	1380 *(404)*	1900 *(557)*	2380 *(696)*	3040 *(891)*	3600 *(1058)*	5700 *(1670)*	7300 *(2144)*	10900 *(3202)*
		R407C	860 *(250)*	1305 *(383)*	1800 *(527)*	2250 *(660)*	2880 *(844)*	3420 *(1003)*	5400 *(1582)*	6900 *(2031)*	10400 *(3033)*
		R404A R507	950 *(278)*	1450 *(425)*	2000 *(586)*	2500 *(733)*	3200 *(938)*	3800 *(1114)*	6000 *(1758)*	7700 *(2257)*	11500 *(3370)*
		R22	900 *(264)*	1380 *(404)*	1900 *(557)*	2380 *(696)*	3000 *(891)*	3600 *(1058)*	5700 *(1670)*	7300 *(2144)*	10900 *(3202)*
		R134a	855 *(250)*	1305 *(383)*	1800 *(527)*	2250 *(660)*	2880 *(844)*	3420 *(1003)*	5400 *(1582)*	6930 *(2031)*	10350 *(3033)*
Air Flow	CFM *(L/s)*		130 *(61)*	180 *(85)*	237 *(112)*	270 *(127)*	440 *(208)*	440 *(208)*	928 *(438)*	807 *(381)*	1242 *(586)*
Refrigerant ** Charge R407A	Lbs *(Kg)*		0.4 *(0.2)*	0.5 *(0.2)*	0.7 *(0.3)*	0.8 *(0.4)*	0.9 *(0.4)*	1.2 *(0.5)*	1.4 *(0.6)*	2.3 *(1.0)*	3.4 *(1.5)*

LOW TEMPERATURE MODELS - CAPACITY *

Model KTL			009L	013L	017L	021L	028L	033L	052L	066L	099L
Number of Fans			1	1	1	1	1	1	2	2	3
Capacity BTUH *(WATTS)*	Evap Temp. -20°F *(-28.9°C)*	R407A R448A	810 *(237)*	1190 *(348)*	1620 *(473)*	2000 *(584)*	2660 *(780)*	3100 *(919)*	4900 *(1448)*	6300 *(1837)*	9400 *(2756)*
		R407C	770 *(224)*	1125 *(329)*	1530 *(448)*	1890 *(554)*	2520 *(739)*	2970 *(870)*	4700 *(1372)*	6000 *(1741)*	8900 *(2611)*
		R404A R507	850 *(249)*	1250 *(366)*	1700 *(498)*	2100 *(615)*	2800 *(821)*	3300 *(967)*	5200 *(1524)*	6600 *(1934)*	9900 *(2901)*
		R22	810 *(237)*	1190 *(348)*	1620 *(473)*	2000 *(584)*	2700 *(780)*	3100 *(919)*	4900 *(1448)*	6300 *(1837)*	9400 *(2756)*
		R134a	765 *(224)*	1125 *(329)*	1530 *(448)*	1890 *(554)*	2520 *(739)*	2970 *(870)*	4680 *(1372)*	5940 *(1741)*	8910 *(2611)*
Air Flow	CFM *(L/s)*		130 *(61)*	180 *(85)*	237 *(112)*	270 *(127)*	440 *(208)*	440 *(208)*	928 *(438)*	807 *(381)*	1242 *(586)*
Refrigerant ** Charge R407A	Lbs *(Kg)*		0.4 *(0.2)*	0.5 *(0.2)*	0.7 *(0.3)*	0.8 *(0.4)*	0.9 *(0.4)*	1.2 *(0.5)*	1.4 *(0.6)*	2.3 *(1.0)*	3.4 *(1.5)*

*** Derate capacity by 5% when using EC Motors**

Capacities rated using 10°F *(5.6°C)* TD & 100°F *(38°C)* liquid temperature.
Capacities at other TD within a range of 8 to 15 °F *(4.4 to 8.3°C)* are directly proportional to TD, or use formula: Capacity = Rated capacity ÷ 10 x TD.
For capacities at TD outside of range 8 to 15 °F *(4.4 to 8.3°C)*, or liquid temperature lower than 75°F *(24°)*, consult factory.
Capacities for R448A, R407A and R407C are based on mean temperature. Mean temperature is the average temperature between the saturated suction temperature and the temperature feeding the evaporator. For dew point ratings, consult factory.
For R449A, use R448A data.

*** CAPACITY CORRECTION FACTORS FOR LOW TEMPERATURE UNITS**

SATURATED SUCTION TEMPERATURE °F *(°C)*	0 *(-17.8)*	-10 *(23.3)*	-20 *(-28.9)*
FACTOR	1.06	1.03	1.0

NO CORRECTION FACTOR REQUIRED FOR MEDIUM TEMP. UNITS

**** REFRIGERANT CHARGE CONVERSION FACTORS**

R448A	R407C	R404A	R507	R22	R134a
0.96	0.99	0.92	0.93	1.02	1.03

ELECTRICAL DATA
115/1/60

AIR DEFROST

MODEL KTL	No. of FANS	FAN MOTOR(S) - SHADED POLE (STANDARD)				FAN MOTOR(S)- EC (OPTIONAL)			
		TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS	TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS
010MA-S1A	1	1.2	1.5	15	70	-	-	-	-
015MA-S1A	1	1.2	1.5	15	70	-	-	-	-
020MA-S1A	1	1.2	1.5	15	70	-	-	-	-
025MA-S1A	1	1.2	1.5	15	70	-	-	-	-
032MA-S1A	1	1.2	1.5	15	70	0.60	0.75	15	30
038MA-S1A	1	1.2	1.5	15	70	0.60	0.75	15	30
060MA-S1A	2	2.4	2.7	15	140	1.20	1.35	15	60
077MA-S1A	2	2.4	2.7	15	140	1.20	1.35	15	60
115MA-S1A	3	3.6	3.9	15	210	1.80	1.95	15	90

ELECTRIC DEFROST

MODEL KTL	No. of FANS	FAN MOTOR(S) - SHADED POLE (STANDARD)				FAN MOTOR(S)- EC (OPTIONAL)				DEFROST HEATERS			
		TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS	TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS	TOTAL WATTS	TOTAL AMPS	M.C.A.	M.O.P
010ME-S1A	1	1.2	1.5	15	70	-	-	-	-	206	1.8	2.2	15
015ME-S1A	1	1.2	1.5	15	70	-	-	-	-	530	4.6	5.8	15
020ME-S1A	1	1.2	1.5	15	70	-	-	-	-	530	4.6	5.8	15
025ME-S1A	1	1.2	1.5	15	70	-	-	-	-	530	4.6	5.8	15
032ME-S1A	1	1.2	1.5	15	70	0.60	0.75	15	30	750	6.5	8.2	15
038ME-S1A	1	1.2	1.5	15	70	0.60	0.75	15	30	750	6.5	8.2	15
060ME-S1A	2	2.4	2.7	15	140	1.20	1.35	15	60	1100	9.6	12.0	15
077ME-S1A	2	2.4	2.7	15	140	1.20	1.35	15	60	1540	13.4	16.8	20
115ME-S1A	3	3.6	3.9	15	210	1.80	1.95	15	90	2270	19.7	24.6	25
009LE-S1A	1	1.2	1.5	15	70	-	-	-	-	206	1.8	2.2	15
013LE-S1A	1	1.2	1.5	15	70	-	-	-	-	530	4.6	5.8	15
017LE-S1A	1	1.2	1.5	15	70	-	-	-	-	530	4.6	5.8	15
021LE-S1A	1	1.2	1.5	15	70	-	-	-	-	530	4.6	5.8	15
028LE-S1A	1	1.2	1.5	15	70	0.60	0.75	15	30	750	6.5	8.2	15
033LE-S1A	1	1.2	1.5	15	70	0.60	0.75	15	30	750	6.5	8.2	15
052LE-S1A	2	2.4	2.7	15	140	1.20	1.35	15	60	1100	9.6	12.0	15
066LE-S1A	2	2.4	2.7	15	140	1.20	1.35	15	60	1540	13.4	16.8	20
099LE-S1A	3	3.6	3.9	15	210	1.80	1.95	15	90	2270	19.7	24.6	25

ELECTRICAL DATA
208-230/1/60

AIR DEFROST

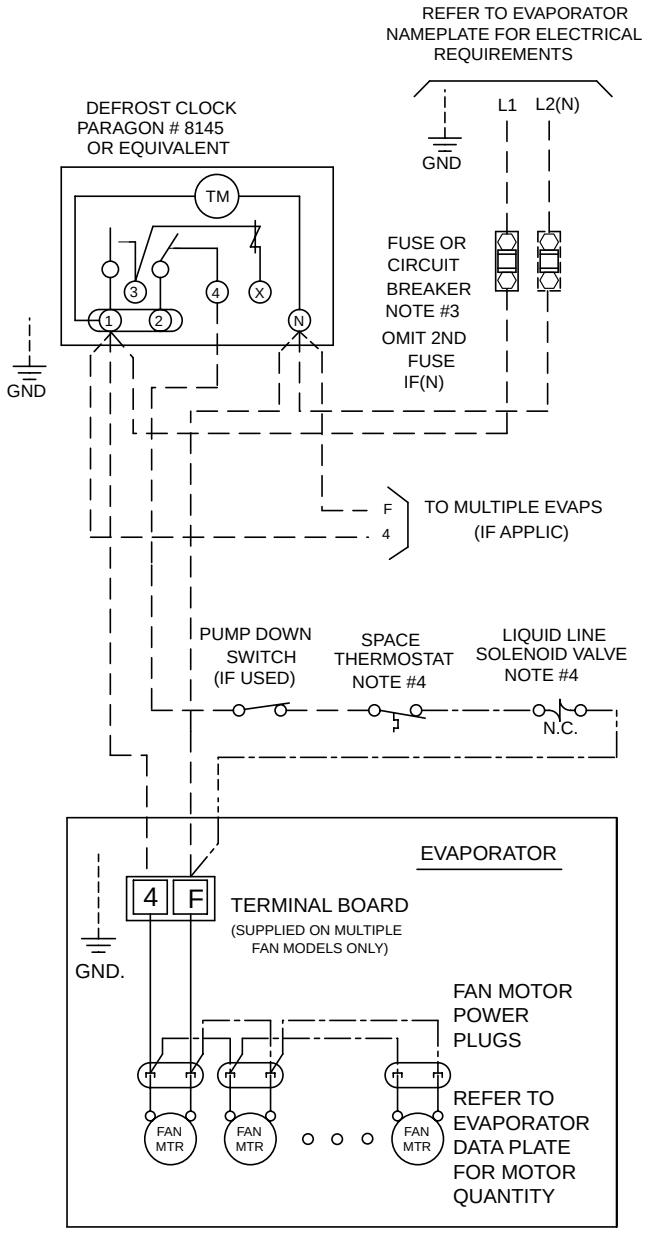
MODEL KTL	No. of FANS	FAN MOTOR(S) - SHADED POLE(STANDARD)				FAN MOTOR(S)- EC (OPTIONAL)			
		TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS	TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS
010MA-S2A	1	0.7	0.9	15	60	-	-	-	-
015MA-S2A	1	0.7	0.9	15	60	-	-	-	-
020MA-S2A	1	0.7	0.9	15	60	-	-	-	-
025MA-S2A	1	0.7	0.9	15	60	-	-	-	-
032MA-S2A	1	0.7	0.9	15	60	0.30	0.40	15	30
038MA-S2A	1	0.7	0.9	15	60	0.30	0.40	15	30
060MA-S2A	2	1.4	1.6	15	120	0.60	0.70	15	60
077MA-S2A	2	1.4	1.6	15	120	0.60	0.70	15	60
115MA-S2A	3	2.1	2.3	15	180	0.90	1.00	15	90

ELECTRIC DEFROST

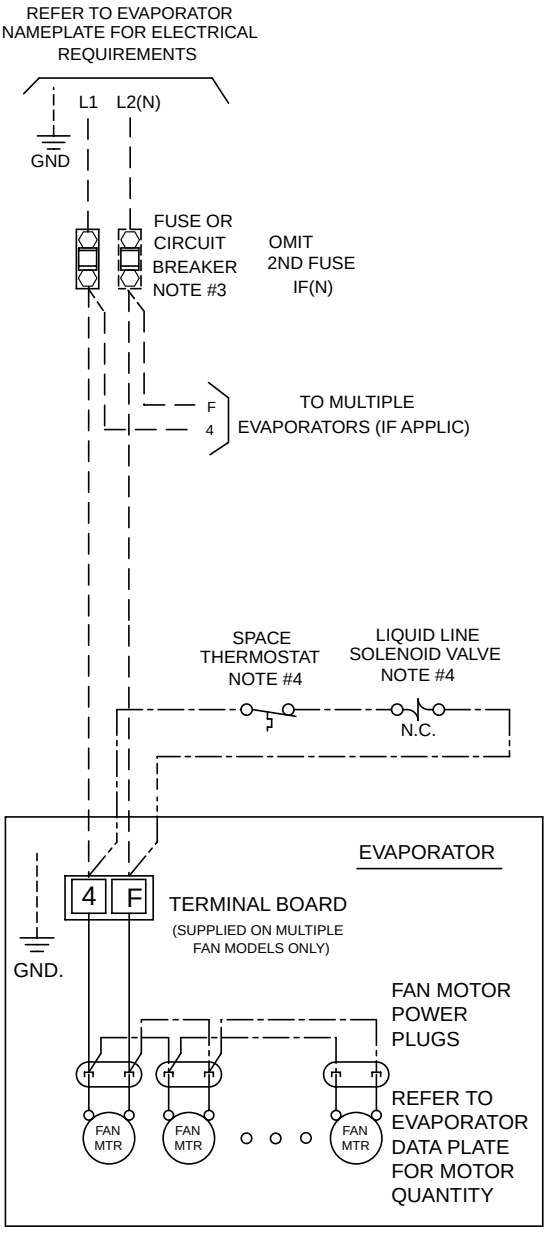
MODEL KTL	No. of FANS	FAN MOTOR(S) - SHADED POLE(STANDARD)				FAN MOTOR(S)- EC (OPTIONAL)				DEFROST HEATERS			
		TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS	TOTAL MOTOR FLA	M.C.A.	M.O.P	WATTS	TOTAL WATTS	TOTAL AMPS	M.C.A.	M.O.P
010ME-S2A	1	0.7	0.9	15	60	-	-	-	-	206	0.9	1.1	15
015ME-S2A	1	0.7	0.9	15	60	-	-	-	-	530	2.3	2.9	15
020ME-S2A	1	0.7	0.9	15	60	-	-	-	-	530	2.3	2.9	15
025ME-S2A	1	0.7	0.9	15	60	-	-	-	-	530	2.3	2.9	15
032ME-S2A	1	0.7	0.9	15	60	0.30	0.40	15	30	750	3.3	4.1	15
038ME-S2A	1	0.7	0.9	15	60	0.30	0.40	15	30	750	3.3	4.1	15
060ME-S2A	2	1.4	1.6	15	120	0.60	0.70	15	60	1100	4.8	6.0	15
077ME-S2A	2	1.4	1.6	15	120	0.60	0.70	15	60	1540	6.7	8.4	15
115ME-S2A	3	2.1	2.3	15	180	0.90	1.00	15	90	2270	9.9	12.4	15
009LE-S2A	1	0.7	0.9	15	60	-	-	-	-	206	0.9	1.1	15
013LE-S2A	1	0.7	0.9	15	60	-	-	-	-	530	2.3	2.9	15
017LE-S2A	1	0.7	0.9	15	60	-	-	-	-	530	2.3	2.9	15
021LE-S2A	1	0.7	0.9	15	60	-	-	-	-	530	2.3	2.9	15
028LE-S2A	1	0.7	0.9	15	60	0.30	0.40	15	30	750	3.3	4.1	15
033LE-S2A	1	0.7	0.9	15	60	0.30	0.40	15	30	750	3.3	4.1	15
052LE-S2A	2	1.4	1.6	15	120	0.60	0.70	15	60	1100	4.8	6.0	15
066LE-S2A	2	1.4	1.6	15	120	0.60	0.70	15	60	1540	6.7	8.4	15
099LE-S2A	3	2.1	2.3	15	180	0.90	1.00	15	90	2270	9.9	12.4	15

WIRING DIAGRAM
AIR DEFROST - ALL VOLTAGES

WITH DEFROST TIME CLOCK



WITHOUT DEFROST TIME CLOCK



NOTES

1). USE COPPER CONDUCTORS ONLY

2). USE 75°C WIRE (OR HIGHER)

3). OVERCURRENT PROTECTION FOR EVAPORATOR FAN MOTORS AND DEFROST HEATERS MUST NOT EXCEED MAXIMUM VALUE SHOWN ON EVAPORATOR NAMEPLATE.

4). MAY BE FACTORY INSTALLED-MOUNTED AND WIRED ON EVAPORATOR .

1-TL AD 03/08

TERMINALS

○ -COMPONENT TERMINAL

□ -TERMINAL BLOCK TERMINAL

CONDUCTORS/WIRING

——————— FACTORY WIRING

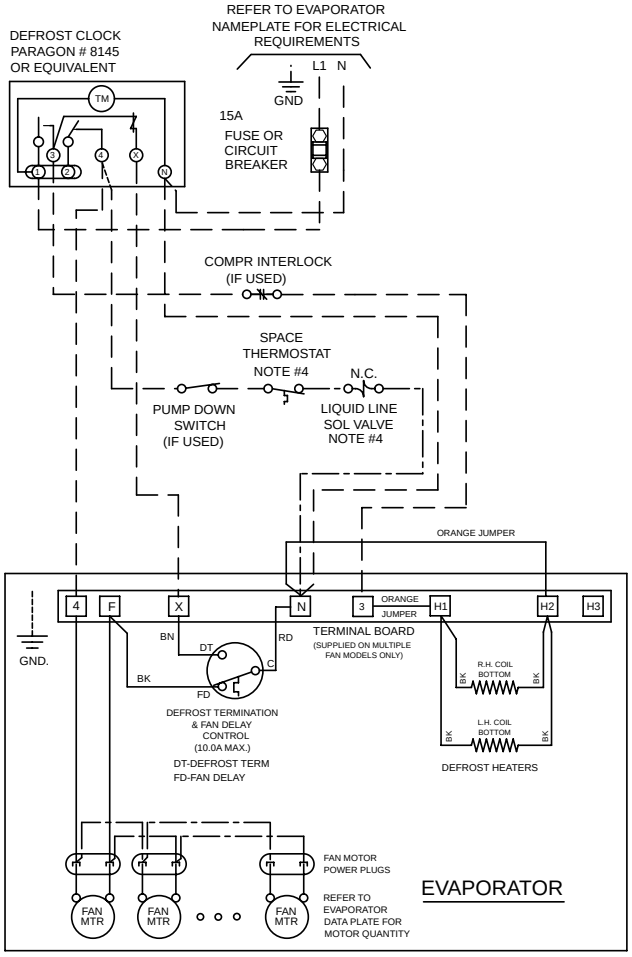
– – – – – – – WIRING BY OTHERS

—·—·—·—·— OPTIONAL FACTORY OR BY OTHERS

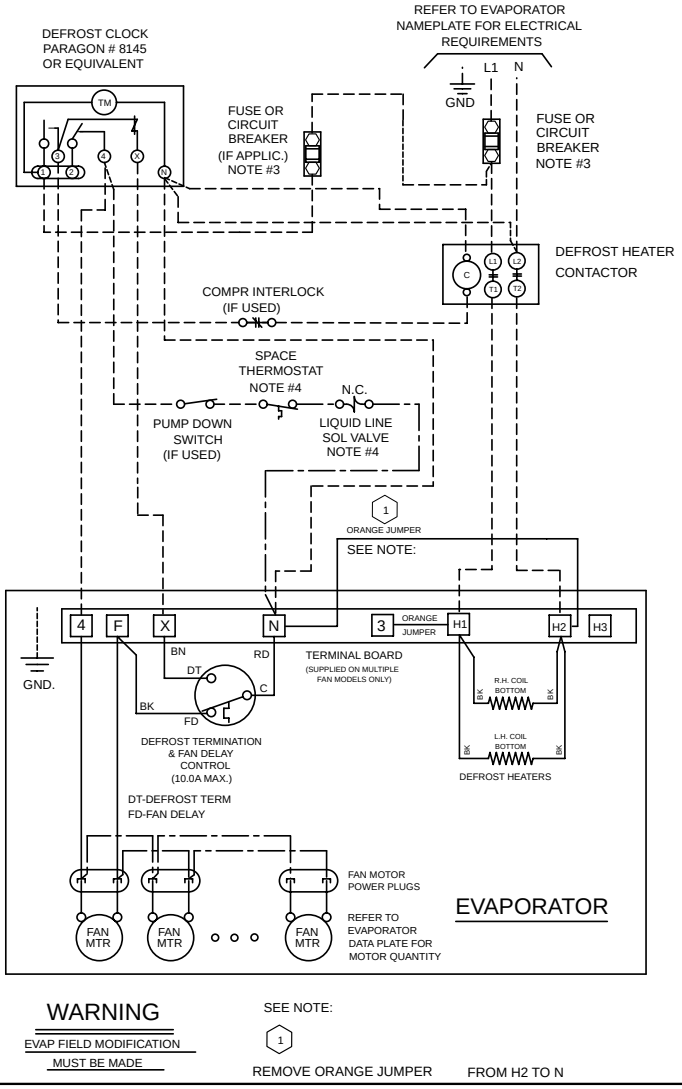
ALL FIELD WIRING MUST BE DONE IN COMPLIANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.

WIRING DIAGRAM
ELECTRIC DEFROST - 115V

FOR ALL MODELS WITHOUT DEFROST HEATER CONTACTOR
USING MAXIMUM 15A HEATER OVERCURRENT PROTECTION



FOR ALL MODELS USING DEFROST HEATER CONTACTOR



WARNING

EVAP FIELD MODIFICATION
MUST BE MADE

SEE NOTE:

1

REMOVE ORANGE JUMPER FROM H2 TO N

NOTES

1). USE COPPER CONDUCTORS ONLY

2). USE 75°C WIRE (OR HIGHER)

3). OVERCURRENT PROTECTION FOR EVAPORATOR FAN MOTORS AND DEFROST HEATERS MUST NOT EXCEED MAXIMUM VALUE SHOWN ON EVAPORATOR NAMEPLATE.

4.) MAY BE FACTORY INSTALLED-MOUNTED AND WIRED ON EVAPORATOR

TERMINALS

O -COMPONENT TERMINAL

□ -TERMINAL BLOCK TERMINAL

CONDUCTORS/WIRING

——————— FACTORY WIRING

- — — — — — — WIRING BY OTHERS

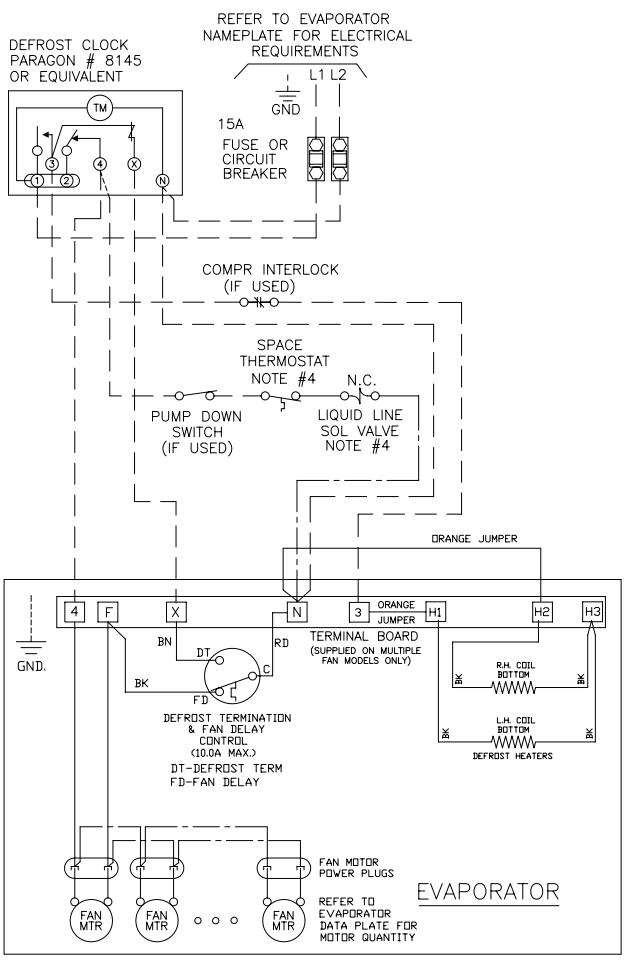
—·——·——·—— OPTIONAL FACTORY OR BY OTHERS

ALL FIELD WIRING MUST BE DONE IN COMPLIANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.

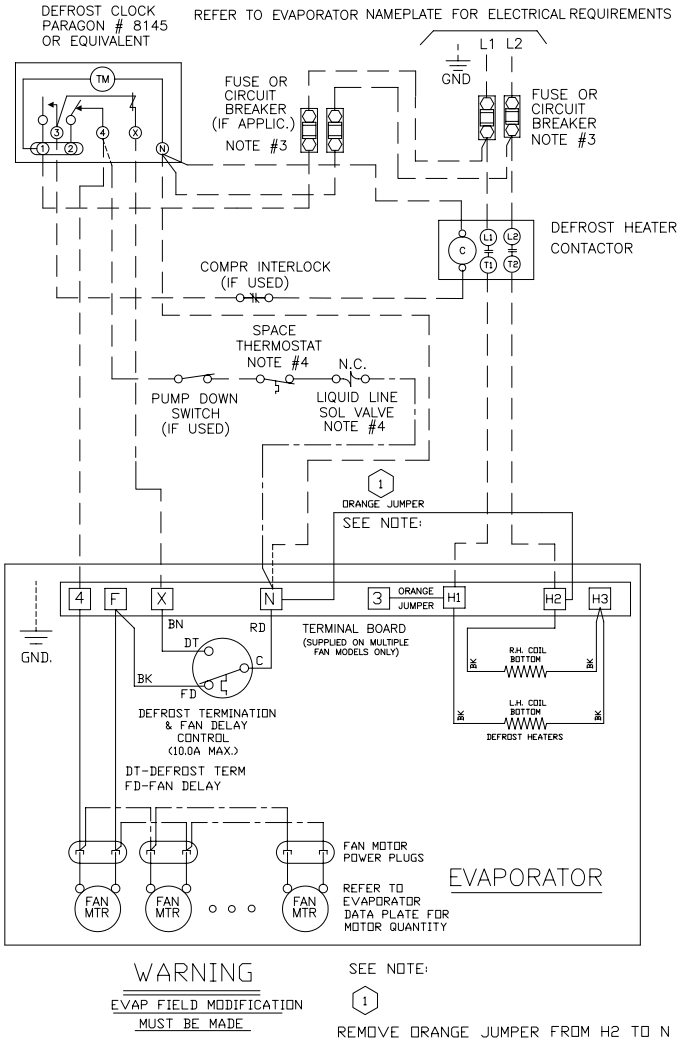
2-TL ED1 03/08

WIRING DIAGRAM
ELECTRIC DEFROST - 230V

FOR ALL MODELS WITHOUT DEFROST HEATER CONTACTOR
USING MAXIMUM 15A HEATER OVERCURRENT PROTECTION



FOR ALL MODELS USING DEFROST HEATER CONTACTOR



WARNING

EVAP FIELD MODIFICATION
MUST BE MADE

SEE NOTE:
1
REMOVE ORANGE JUMPER FROM H2 TO N

NOTES

1). USE COPPER CONDUCTORS ONLY

2). USE 75°C WIRE (OR HIGHER)

3). OVERCURRENT PROTECTION FOR EVAPORATOR FAN MOTORS AND DEFROST HEATERS MUST NOT EXCEED MAXIMUM VALUE SHOWN ON EVAPORATOR NAMEPLATE.

4.) MAY BE FACTORY INSTALLED-MOUNTED AND WIRED ON EVAPORATOR

TERMINALS

○ -COMPONENT TERMINAL

□ -TERMINAL BLOCK TERMINAL

CONDUCTORS/WIRING

———————— FACTORY WIRING

– – – – – – – – WIRING BY OTHERS

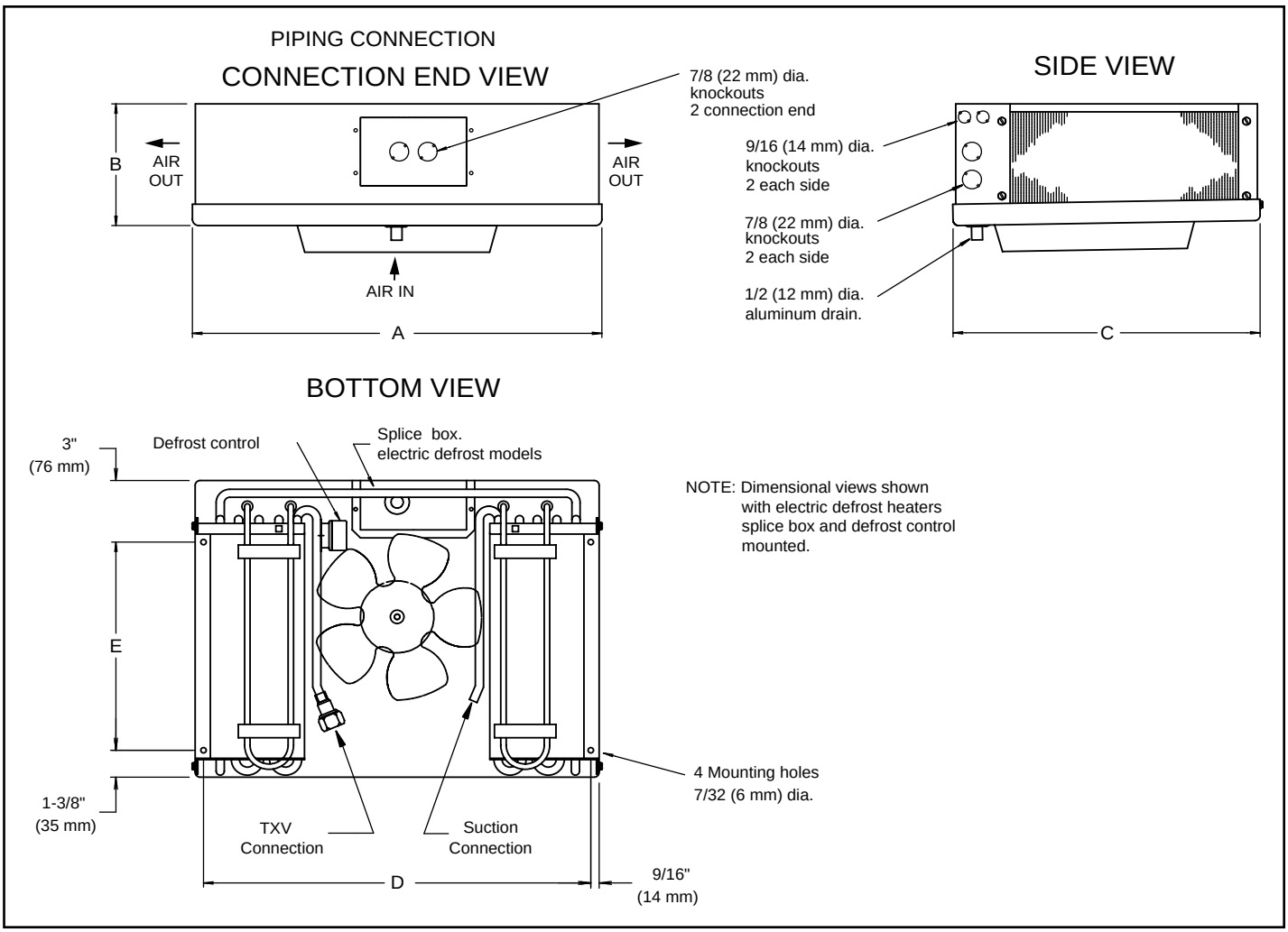
—·—·—·—·— OPTIONAL FACTORY OR BY OTHERS

ALL FIELD WIRING MUST BE DONE IN COMPLIANCE WITH ALL APPLICABLE LOCAL AND NATIONAL CODES.

3-TL ED2 02/13

DIMENSIONAL DATA - 1 FAN

Inches *(mm)*

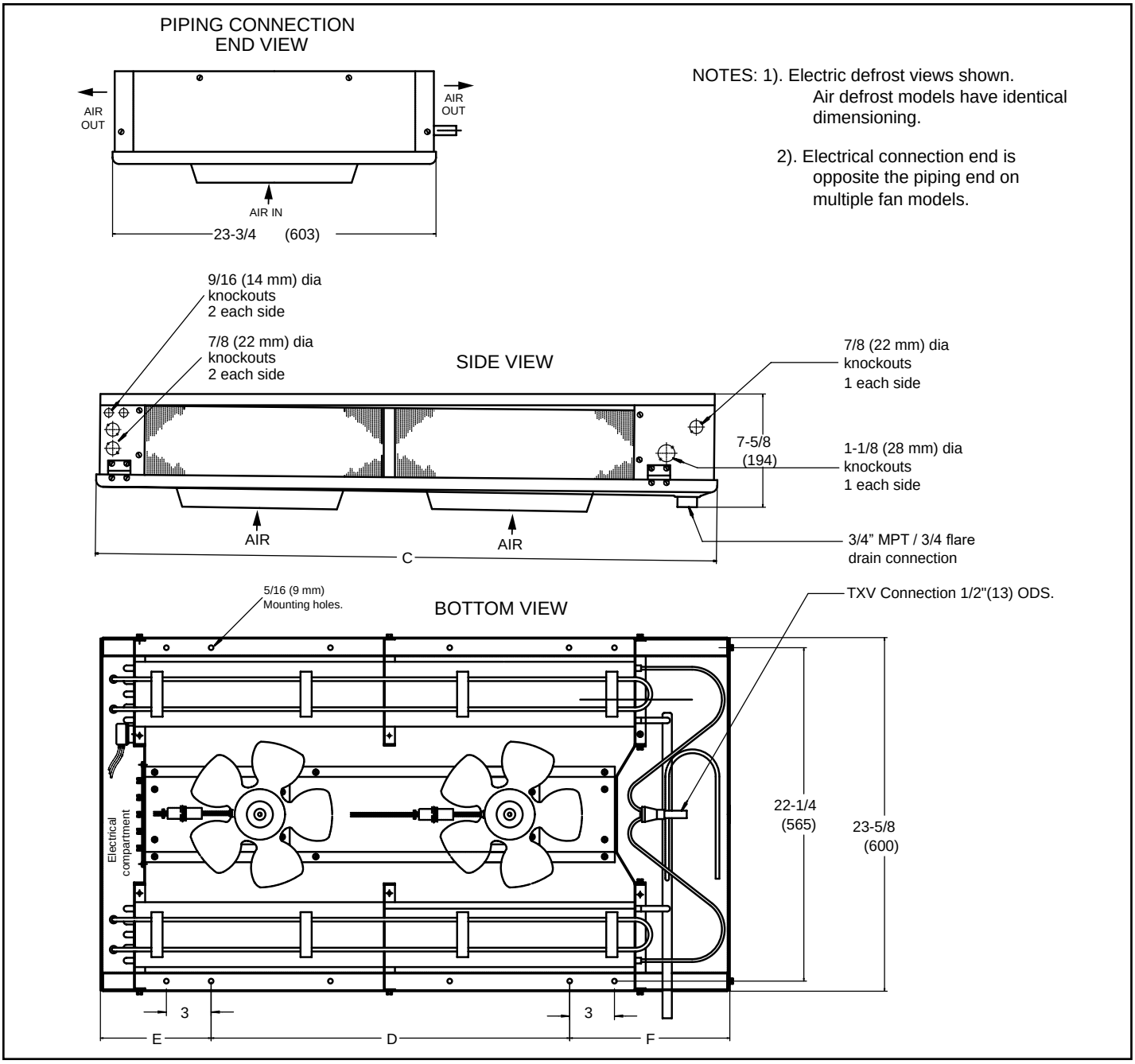


MODEL	Suc. Conn.	TXV	A		B		C		D		E		APPROX. WEIGHT	
KTL	(ID) Sweat	Inlet Size	Inches	*mm*	Inches	*mm*	Inches	*mm*	Inches	*mm*	Inches	*mm*	Lbs.	*Kgs*
010M*	3/8	1/2" Flare	18 7/8	*479*	4 1/2	*114*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	11.6	*5.3*
015M*	3/8	1/2" Flare	18 7/8	*479*	4 1/2	*114*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	12.6	*5.7*
020M*	3/8	1/2" Flare	18 7/8	*479*	5 1/2	*140*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	13.7	*6.2*
025M*	3/8	1/2" Flare	18 7/8	*479*	5 1/2	*140*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	14.7	*6.7*
032M*	3/8	1/2" ODS	21 7/8	*556*	5 1/2	*140*	19 1/8	*486*	20 3/4	*527*	14 3/4	*375*	18.9	*8.6*
038M*	3/8	1/2" ODS	21 7/8	*556*	5 1/2	*140*	19 1/8	*486*	20 3/4	*527*	14 3/4	*375*	20.0	*9.1*
009LE	3/8	1/2" Flare	18 7/8	*479*	4 1/2	*114*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	11.6	*5.3*
013LE	3/8	1/2" Flare	18 7/8	*479*	4 1/2	*114*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	12.6	*5.7*
017LE	3/8	1/2" ODS	18 7/8	*479*	5 1/2	*140*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	13.7	*6.2*
021LE	3/8	1/2" ODS	18 7/8	*479*	5 1/2	*140*	14 1/8	*359*	17 3/4	*451*	9 3/4	*248*	14.7	*6.7*
028LE	1/2	1/2" ODS	21 7/8	*556*	5 1/2	*140*	19 1/8	*486*	20 3/4	*527*	14 3/4	*375*	18.9	*8.6*
033LE	1/2	1/2" ODS	21 7/8	*556*	5 1/2	*140*	19 1/8	*486*	20 3/4	*527*	14 3/4	*375*	20.0	*9.1*

*** - A (AIR DEFROST) OR E (ELECTRIC DEFROST)**

DIMENSIONAL DATA - 2 & 3 FAN

Inches *(mm)*



MODEL KTL	Suc. Conn.	TXV	C		D		E		F		APPROX. WEIGHT	
	(ID) Sweat	Inlet Size	Inches	*mm*	Inches	*mm*	Inches	*mm*	Inches	*mm*	Lbs.	*Kgs*
060M	1/2	1/2" ODS	42 3/4	*1086*	4 holes @ 8"	*203*	7 11/16	*195*	10 15/16	*278*	37.8	*17.1*
077M	5/8	1/2" ODS	42 3/4	*1086*	4 holes @ 8"	*203*	7 11/16	*195*	10 15/16	*278*	39.9	*18.1*
115M	5/8	1/2" ODS	59 1/2	*1511*	6 holes @ 8"	*203*	8	*203*	11 7/16	*291*	59.9	*27.2*
052LE	5/8	1/2" ODS	42 3/4	*1086*	4 holes @ 8"	*203*	7 11/16	*195*	10 15/16	*278*	37.8	*17.1*
066LE	5/8	1/2" ODS	42 3/4	*1086*	4 holes @ 8"	*203*	7 11/16	*195*	10 15/16	*278*	39.9	*18.1*
099LE	7/8	1/2" ODS	59 1/2	*1511*	6 holes @ 8"	*203*	8	*203*	11 7/16	*291*	59.9	*27.2*

NOZZLE SELECTIONS
(FACTORY INSTALLED)

For all applications and refrigerants

Model KTL	Nozzle
010MA/ME	NA
015MA/ME	NA
020MA/ME	NA
025MA/ME	NA
032MA/ME	L-1/4
038MA/ME	L-1/3
060MA/ME	L-1/2
077MA/ME	L-3/4
115MA/ME	L-1

Model KTL	Nozzle
009LE	NA
013LE	NA
017LE	L-1/4
021LE	L-1/3
028LE	L-1/2
033LE	L-1/2
052LE	L-1
066LE	L-1
099LE	L-1 1/2

RECOMMENDED EXPANSION VALVE SELECTION
MEDIUM TEMPERATURE MODELS

SPORLAN

MODEL KTL	TD	R404A R507	R448A R407A R407C R22
010M	10	EGS-1/8-C	EGV-1/5-C
	15		
015M	10	EGS-1/6-C	EGV-1/5-C
	15		
020M	10	EGS-1/6-C	EGV-1/5-C
	15	EGS-1/6-C	EGV-1/3-C
025M	10	EGS-1/6-C	EGV-1/5-C
	15		EGV-1/3-C
032M	10	SBFSE-AA-C	SBFVE-AAA-C
	15		SBFVE-AA-C
038M	10	SBFSE-AA-C	SBFVE-AAA-C
	15	SBFSE-A-C	SBFVE-AA-C
060M	10	SBFSE-A-C	SBFVE-AA-C
	15		
077M	10	SBFSE-A-C	SBFVE-AA-C
	15		SBFVE-A-C
115M	10	SBFSE-A-C	SBFVE-A-C
	15	SBFSE-B-C	

For medium temp. R-507, refrigerant designation changes from 'S' to 'P'.
For R449A, use R448A data.

ALCO

MODEL KTL	TD	R404A R507	R448A R407A R407C R22
010M	10	HF-1/8-SC	HF-1/4-HC
	15		
015M	10	HF-1/8-SC	HF-1/4-HC
	15		
020M	10	HF-1/8-SC	HF-1/4-HC
	15	HF-1/4-SC	
025M	10	HF-1/4-SC	HF-1/4-HC
	15		
032M	10	HFESC-1/4-SC	HFESC-1/4-HC
	15	HFESC-1/2-SC	HFESC-1/2-HC
038M	10	HFESC-1/4-SC	HFESC-1/2-HC
	15	HFESC-1/2-SC	
060M	10	HFESC-1/2-SC	HFESC-1/2-HC
	15	HFESC-1-SC	HFESC-1-HC
077M	10	HFESC-1/2-SC	HFESC-1-HC
	15	HFESC-1-SC	
115M	10	HFESC-1-SC	HFESC-1-HC
	15	HFESC-1 1/4-SC	HFESC-1 1/2-HC

ALL TXV Selections based on 90-100°F liquid.
For R449A, use R448A data.

DANFOSS

MODEL KTL	TD	R404A R507	R448A R407A R407C R22
010M	10	TUA-R404A-0-N	TUA-R22-0-N
	15	TUA-R404A-1-N	
015M	10	TUA-R404A-1-N	TUA-R22-0-N
	15	TUA-R404A-2-N	TUA-R22-1-N
020M	10	TUA-R404A-2-N	TUA-R22-1-N
	15	TUAE-R404A-3-N	TUAE-R22-2-N
025M	10	TUA-R404A-2-N	TUA-R22-1-N
	15	TUAE-R404A-3-N	TUAE-R22-2-N
032M	10	TUAE-R404A-3-N	TUAE-R22-2-N
	15	TUAE-R404A-4-N	TUAE-R22-3-N
038M	10	TUAE-R404A-3-N	TUAE-R22-3-N
	15	TUAE-R404A-4-N	TUAE-R22-4-N
060M	10	TUAE-R404A-5-N	TUAE-R22-4-N
	15	TUAE-R404A-6-N	TUAE-R22-5-N
077M	10	TUAE-R404A-5-N	TUAE-R22-5-N
	15	TUAE-R404A-6-N	TUAE-R22-6-N
115M	10	TUAE-R404A-6-N	TUAE-R22-6-N
	15	TUAE-R404A-8-N	TUAE-R22-7-N

For R449A, use R448A data.

RECOMMENDED EXPANSION VALVE SELECTION - MEDIUM TEMPERATURE MODELS

SPORLAN - R407A R448A

MODEL KTL		009L		013L		017L		021L		028L	
		BTUH	VALVE #	BTUH	VALVE #	BTUH	VALVE #	BTUH	VALVE #	BTUH	VALVE #
EVAP TEMP. °F	0	865	EGV-1/5-C	1,273	EGV-1/5-C	1,729	EGVE-1/5-C	2,138	SBFVE-AAA-C	2,850	SBFVE-AAA-C
	-10	836	EGV-1/5-Z	1,235	EGV-1/5-Z	1,682	SBFVE-AAA-Z	2,071	SBFVE-AAA-Z	2,765	SBFVE-AAA-Z
	-15	827		1,216		1,644		2,033		2,717	
	-20	808		1,188		1,615		1,995		2,660	

MODEL KTL		033L		052L		066L		099L	
		BTUH	VALVE #	BTUH	VALVE	BTUH	VALVE #	BTUH	VALVE #
EVAP TEMP. °F	0	3,354	SBFVE-AAA-C	5,282	SBFVE-AA-C	6,707	SBFVE-AA-C	10,061	SBFVE-A-C
	-10	3,259	SBFVE-AA-Z	5,140	SBFVE-AA-Z	6,517	SBFVE-AA-Z	9,785	SBFVE-A-Z
	-15	3,202		5,035		6,394		9,595	
	-20	3,135		4,940		6,270		9,405	

Selections based on 90-100°F liquid.
For R407A valves operating below 0F, the pressure limiting charge 'ZP40' may be substituted for the 'Z' charge.
R407A derated by .95 factor
For R449A, use R448A data.

SPORLAN - R404A

MODEL KTL		009L		013L		017L		021L		028L	
		BTUH	VALVE #	BTUH	VALVE #	BTUH	VALVE #	BTUH	VALVE #	BTUH	VALVE #
EVAP TEMP. °F	0	910	EGS-1/8-C	1,340	EGS-1/8-C	1,820	SBFSE-AAA-C	2,250	SBFSE-AAA-C	3,000	SBFSE-AA-C
	-10	880	EGS-1/8-Z	1,300	EGS-1/8-Z	1,770	SBFSE-AAA-Z	2,180	SBFSE-AAA-Z	2,910	SBFSE-AA-Z
	-15	870		1,280		1,730		2,140		2,860	
	-20	850		1,250		1,700		2,100		2,800	

MODEL KTL		033L		052L		066L		099L	
		BTUH	VALVE #	BTUH	VALVE	BTUH	VALVE #	BTUH	VALVE #
EVAP TEMP. °F	0	3,530	SBFSE-AA-C	5,560	SBFSE-AA-C	7,060	SBFSE-A-C	10,590	SBFSE-A-C
	-10	3,430	SBFSE-AA-Z	5,410	SBFSE-A-Z	6,860	SBFSE-A-Z	10,300	SBFSE-A-Z
	-15	3,370		5,300		6,730		10,100	
	-20	3,300		5,200		6,600		9,900	

Selections based on 90-100°F liquid.
For medium temp. R-507, refrigerant designation changes from 'S' to 'P'.
For R404A/R507 valves operating below 0F, the pressure limiting charge 'ZP' may be substituted for the 'Z' charge.
For R449A, use R448A data.

DEFROST KIT AND FUSE PACKAGE SELECTIONS

Models with Standard Shaded Pole Motors

Medium Temperature, 6 FPI, with Standard Shaded Pole Motors

TEMP	FPI	# of Fans	Model TL	Voltage	1 X EVAPORATOR		2 X EVAPORATOR	
					Defrost Kit	Fuse Package	Defrost Kit	Fuse Package
ME - MEDIUM TEMPERATURE	6	1	010ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			010ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			015ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			015ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			020ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			020ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			025ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			025ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			032ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			032ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			038ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			038ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		2	060ME-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			060ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			077ME-S1A	115/1/60	DFK-01	FP-002	DFK-05	FP-006
			077ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		3	115ME-S1A	115/1/60	DFK-01	FP-003	DFK-05	FP-007
			115ME-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008

Low Temperature, 6 FPI, with Standard Shaded Pole Motors

TEMP	FPI	# of Fans	Model KTL	Voltage	1 X EVAPORATOR		2 X EVAPORATOR	
					Defrost Kit	Fuse Package	Defrost Kit	Fuse Package
LE - LOW TEMPERATURE	6	1	009LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			009LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			013LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			013LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			017LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			017LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			021LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			021LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			028LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			028LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			033LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			033LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		2	052LE-S1A	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			052LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			066LE-S1A	115/1/60	DFK-01	FP-002	DFK-05	FP-006
			066LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		3	099LE-S1A	115/1/60	DFK-01	FP-003	DFK-05	FP-007
			099LE-S2A	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008

Models with optional EC Motors

Medium Temperature, 6 FPI, with optional EC Motors

TEMP	FPI	# of Fans	Model KTL	Voltage	1 X EVAPORATOR		2 X EVAPORATOR	
					Defrost Kit	Fuse Package	Defrost Kit	Fuse Package
ME - MEDIUM	6	1	033LE-S1A-ECM	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			033LE-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		2	052LE-S1A-ECM	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			052LE-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			066LE-S1A-ECM	115/1/60	DFK-01	FP-002	DFK-05	FP-006
			066LE-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		3	099LE-S1A-ECM	115/1/60	DFK-01	FP-003	DFK-05	FP-007
			099LE-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008

DEFROST KIT AND FUSE PACKAGE SELECTIONS

Models with optional EC Motors (cont'd)

Low Temperature, 6 FPI, with optional EC Motors

TEMP	FPI	# of Fans	Model KTL	Voltage	1 X EVAPORATOR		2 X EVAPORATOR	
					Defrost Kit	Fuse Package	Defrost Kit	Fuse Package
LE - LOW	6	1	**038ME-S1A-ECM**	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			038ME-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		2	**060ME-S1A-ECM**	115/1/60	DFK-01	FP-001	DFK-05	FP-004
			060ME-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
			077ME-S1A-ECM	115/1/60	DFK-01	FP-002	DFK-05	FP-006
			077ME-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008
		3	**115ME-S1A-ECM**	115/1/60	DFK-01	FP-003	DFK-05	FP-007
			115ME-S2A-ECM	208-230/1/60	DFK-02	FP-004	DFK-06	FP-008

DEFROST KIT AND FUSE PACKAGE DETAILS

Defrost Kits

Number of Evaps.	Kit Part Number	Description
1	**DFK-01**	Time Clock, HtrCont - 1x 40A (3P), FB 1x 30A (1P)
1	**DFK-02**	Time Clock, HtrCont - 1x 40A (3P), FB 1x 30A (2P)
1	**DFK-03**	Time Clock, HtrCont - 1x 40A (3P), FB 1x 30A (3P)
1	**DFK-04**	Time Clock, HtrCont - 1x 40A (3P), FB 1x 60A (2P)
2	**DFK-05**	Time Clock, HtrCont - 1x 40A (3P), FB 2x 30A (1P)
2	**DFK-06**	Time Clock, HtrCont - 1x 40A (3P), FB 2x 30A (2P)
2	**DFK-07**	Time Clock, HtrCont - 1x 40A (3P), FB 2x 30A (3P)
2	**DFK-08**	Time Clock, HtrCont - 1x 50A (3P), FB 2x 60A (2P)
2	**DFK-09**	Time Clock, HtrCont - 1x 50A (3P), FB 2x 30A (2P)
1	**DFK-10**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P)
1	**DFK-11**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (3P)
2	**DFK-12**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 4x 30A (2P)
2	**DFK-13**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 4x 30A (3P)
1	**DFK-14**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 1x 30A (2P), FB 1x 30A (3P)
1	**DFK-15**	Time Clock, HtrCont - 1x40A (3P), FanCont - 1x 40A (3P), FB 1x 30A (2P), FB 1x 60A (2P)
1	**DFK-16**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 1x 30A (2P), FB 1x 60A (3P)
1	**DFK-17**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 1x 30A (3P), FB 1x 60A (3P)
2	**DFK-18**	Time Clock, HtrCont - 1x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P), FB 2x 30A (3P)
2	**DFK-19**	Time Clock, HtrCont - 1x 50A (3P), FanCont - 1x 40A (3P), FB 4x 30A (2P)
2	**DFK-20**	Time Clock, HtrCont - 1x 50A (3P), FanCont - 1x 40A (3P), FB 4x 30A (3P)
1	**DFK-21**	Time Clock, HtrCont - 1x 50A (3P), FanCont - 1x 40A (3P), FB 1x 30A (2P), FB 1x 60A (2P)
1	**DFK-22**	Time Clock, HtrCont - 1x 50A (3P), FanCont - 1x 40A (3P), FB 1x 30A (3P), FB 1x 60A (3P)
2	**DFK-23**	Time Clock, HtrCont - 1x 50A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P), FB 2x 30A (3P)
2	**DFK-24**	Time Clock, HtrCont - 1x 50A (3P), FanCont - 1x 40A (3P), FB 2x 30A (3P), FB 2x 60A (3P)
1	**DFK-25**	Time Clock, HtrCont - 2x 40A (3P), FanCont - 1x 40A (3P), FB 1x 30A (2P), FB 2x 60A (2P)
1	**DFK-26**	Time Clock, HtrCont - 2x 40A (3P), FanCont - 1x 40A (3P), FB 1x 30A (3P), FB 2x 60A (3P)
2	**DFK-27**	Time Clock, HtrCont - 2x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P), FB 2x 60A (2P)
2	**DFK-28**	Time Clock, HtrCont - 2x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P), FB 2x 60A (3P)
2	**DFK-29**	Time Clock, HtrCont - 2x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (3P), FB 2x 60A (3P)
2	**DFK-30**	Time Clock, HtrCont - 2x 40A (3P), FanCont - 1x 50A (3P), FB 2x 30A (2P), FB 2x 60A (3P)
1	**DFK-31**	Time Clock, HtrCont - 2x 50A (3P), FanCont - 1x 40A (3P), FB 1x 30A (3P), FB 2x 60A (3P)
2	**DFK-32**	Time Clock, HtrCont - 2x 50A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P), FB 2x 60A (2P)
2	**DFK-33**	Time Clock, HtrCont - 2x 50A (3P), FanCont - 1x 40A (3P), FB 2x 30A (3P), FB 2x 60A (3P)
2	**DFK-34**	Time Clock, HtrCont - 4x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (2P), FB 4x 60A (2P)
2	**DFK-35**	Time Clock, HtrCont - 4x 40A (3P), FanCont - 1x 40A (3P), FB 2x 30A (3P), FB 4x 60A (3P)
2	**DFK-36**	Time Clock, HtrCont - 4x 40A (3P), FanCont - 1x 50A (3P), FB 2x 30A (2P), FB 4x 60A (2P)
2	**DFK-37**	Time Clock, HtrCont - 4x 40A (3P), FanCont - 1x 50A (3P), FB 2x 30A (3P), FB 4x 60A (3P)
2	**DFK-38**	Time Clock, HtrCont - 4x 50A (3P), FanCont - 1x 50A (3P), FB 2x 30A (3P), FB 4x 60A (3P)
1	**DFK-39**	Time Clock, HtrCont1 - 1x 40A (3P), HtrCont2 - 2x 50A (3P), FanCont - 1x 40A (3P), FB 4x 60A (3P)

NOTE: HtrCont = Heater Contactor, FanCont = Fan Contactor, FB = Fuse Block, (1P), (2P), (3P) = Number of Poles

DEFROST KIT AND FUSE PACKAGE DETAILS (cont'd)

Fuse Packages

Package Part Number	Description
FP-001	FUSES (1) 15AMP
FP-002	FUSES (1) 20AMP
FP-003	FUSES (1) 25AMP
FP-004	FUSES (2) 15AMP
FP-006	FUSES (2) 20AMP
FP-007	FUSES (2) 25AMP
FP-008	FUSES (4) 15AMP
FP-010	FUSES (4) 25AMP
FP-012	FUSES (2) 35AMP
FP-013	FUSES (3) 15AMP
FP-014	FUSES (3) 20AMP
FP-015	FUSES (4) 20AMP
FP-016	FUSES (4) 20AMP (6) 45AMP
FP-017	FUSES (4) 35AMP
FP-018	FUSES (6) 15AMP
FP-019	FUSES (6) 20AMP
FP-020	FUSES (2) 30AMP
FP-021	FUSES (4) 30AMP
FP-022	FUSES (8) 15AMP
FP-023	FUSES (2) 25AMP (3) 50AMP
FP-024	FUSES (2) 20AMP (3) 45AMP
FP-025	FUSES (6) 20AMP (6) 60AMP
FP-026	FUSES (6) 15AMP (12) 40AMP
FP-027	FUSES (6) 15AMP (6) 40AMP
FP-028	FUSES (6) 20AMP (12) 40AMP
FP-029	FUSES (6)15AMP (6) 50AMP
FP-030	FUSES (6) 15AMP (6) 45AMP
FP-031	FUSES (6) 15AMP (6) 35AMP
FP-032	FUSES (6) 15AMP (6) 30AMP
FP-033	FUSES (6) 25AMP (12) 50AMP
FP-034	FUSES (6) 20AMP (12) 35AMP
FP-035	FUSES (4) 25AMP (6) 50AMP
FP-036	FUSES (6) 25AMP (12) 60AMP
FP-037	FUSES (6) 20AMP (12) 60AMP
FP-038	FUSES (6) 20AMP (12) 50AMP
FP-039	FUSES (6) 20AMP (12) 45AMP
FP-040	FUSES (6) 15AMP (12) 45AMP
FP-041	FUSES (5) 15AMP
FP-042	FUSES (10) 15AMP
FP-043	FUSES (3) 25AMP (6) 60AMP
FP-044	FUSES (3) 20AMP (6) 60AMP
FP-045	FUSES (3) 20AMP (6) 50AMP
FP-046	FUSES (3) 25AMP (6) 45AMP
FP-047	FUSES (3) 15AMP (6) 45AMP
FP-048	FUSES (4) 15AMP (4) 45AMP
FP-049	FUSES (4) 15AMP (4) 40AMP
FP-050	FUSES (3) 15AMP (3) 60AMP
FP-051	FUSES (4) 20AMP (6) 50AMP
FP-052	FUSES (4) 15AMP (6) 45AMP
FP-053	FUSES (4) 15AMP (6) 30AMP

Package Part Number	Description
FP-054	FUSES (3)15AMP (6) 35AMP
FP-055	FUSES (2) 15AMP (2) 45AMP
FP-056	FUSES (2) 15AMP (2) 40AMP
FP-057	FUSES (2) 20AMP (3) 50AMP
FP-058	FUSES (2) 15AMP (3) 45AMP
FP-059	FUSES (2) 15AMP (3) 30AMP
FP-060	FUSES (2) 15AMP (2) 35AMP
FP-061	FUSES (2) 15AMP (2) 50AMP
FP-062	FUSES (2) 15AMP (2) 60AMP
FP-063	FUSES (2) 15AMP (3) 25AMP
FP-064	FUSES (2) 15AMP (3) 35AMP
FP-065	FUSES (2) 15AMP (3) 40AMP
FP-066	FUSES (2) 15AMP (3) 20AMP
FP-067	FUSES (4) 15AMP (4) 35AMP
FP-068	FUSES (4) 15AMP (4) 50AMP
FP-069	FUSES (4) 15AMP (4) 60AMP
FP-070	FUSES (4) 15AMP (6) 25AMP
FP-071	FUSES (4) 15AMP (6) 35AMP
FP-072	FUSES (4) 15AMP (6) 40AMP
FP-073	FUSES (4) 15AMP (6) 20AMP
FP-074	FUSES (3) 20AMP (3) 60AMP
FP-075	FUSES (3) 20AMP (6) 35AMP
FP-076	FUSES (3) 25AMP (6) 50AMP
FP-077	FUSES (3) 35AMP (9) 45AMP
FP-078	FUSES (3) 15AMP (3) 35AMP
FP-079	FUSES (3)15AMP (3) 45AMP
FP-080	FUSES (3) 15AMP (3) 50AMP
FP-081	FUSES (3) 20AMP (6) 40AMP
FP-082	FUSES (3) 15AMP (3) 40AMP
FP-083	FUSES (3) 15AMP (6) 40AMP
FP-084	FUSES (6) 15AMP (6) 60AMP
FP-085	FUSES (6) 15AMP (12) 35AMP
FP-086	FUSES (3) 35AMP (3) 45AMP (6) 60AMP
FP-087	FUSES (4) 20AMP (4) 40AMP (4) 50AMP
FP-088	FUSES (4) 15AMP (4) 35AMP (4) 40AMP
FP-089	FUSES (2) 20AMP (2) 40AMP (2) 50AMP
FP-090	FUSES (2) 15AMP (2) 35AMP (2) 40AMP
FP-091	FUSES (2) 20AMP (2) 35AMP (2) 40AMP
FP-092	FUSES (2) 25AMP (2) 40AMP (2) 50AMP
FP-093	FUSES (4) 20AMP (4) 35AMP (4) 40AMP
FP-094	FUSES (6) 15AMP (6) 25AMP
FP-095	FUSES (3) 15AMP (3) 25AMP
FP-096	FUSES (3) 15AMP (3) 30AMP
FP-097	FUSES (4) 15AMP (4) 30AMP
FP-098	FUSES (4) 15AMP (4) 25AMP
FP-099	FUSES (4) 15AMP (4) 20AMP
FP-100	FUSES (2) 15AMP (2) 20AMP
FP-101	FUSES (2) 15AMP (2) 25AMP
FP-102	FUSES (2) 15AMP (2) 30AMP
FP-103	FUSES (4) 25AMP (4) 40AMP (4) 50AMP

NOTE: FUSES 30AMP and Below - Class CC Type, FUSES 35AMP and Above - Class J Type

INSPECTION

Careful inspection of all parts when received for loss or damage in transit is very important - Remember, you, the consignee, must make any claim necessary against the transportation company. Shipping damage or missing parts, when discovered at the outset, will prevent later unnecessary and costly delays.
Electrical characteristics should also be checked at this time to ensure that they are as ordered.

APPLICATION

Two-Way evaporators are designed for use in coolers and freezers such as reach in boxes, display cases, back bars, walk-in rooms and any other cooler applications where a low velocity, uniform air flow is required. The compact and low height unit provides maximum useable product storage space.
At room temperatures above 34°F (***1.1°C***) and evaporating temperatures no lower than 27°F (***-2.8°C***) the air flowing through the coil will accomplish the defrost (Air Defrost).
At room temperatures 34°F and below (to -10°F) positive defrosting is required (Electric defrost). These will require the use of:
1. *Time Clock* (to initiate and terminate the defrost cycle),
2. *Defrost termination thermostat* (to prevent unnecessary prolonged heating and steaming of the coil once all the frost and ice has melted). And if a freezer,
3. *Fan delay thermostat* (to prevent evaporator fans starting up right away and blowing water on to the fan blades, guards and floor).
This evaporator coil must not be exposed to any abnormal environments (acidic or caustic) that can result in coil corrosion and leaks. Consult factory for optional baked on phenolic protective coatings.
These evaporators are for use primarily on R448A/ R407A/R407C/R404A/R507/R22 and R134a refrigerants and their approved alternatives / replacements.

INSTALLATION

The installation and start up of evaporators should only be performed by qualified refrigeration mechanics. This equipment should be installed in accordance with all applicable codes, ordinances, and local by-laws.

LOCATION

The evaporator is designed to be mounted to the ceiling of the box or cabinet. Refrigeration piping and electrical connections are routed to the rear sides (through the knock-outs). The unit must be mounted to a level ceiling to ensure complete drainage from the condensate pan to the drain fitting. Refer to the dimensional drawings for the drain fitting and mounting location details.
On freezer applications it is important that warm, humid infiltrated air is ***not drawn directly towards the evaporator.*** Keeping the evaporator away from the door, using strip curtains, and using door switches to lock out and de-energize the liquid solenoid valve are all effective methods to minimize any unnecessary frost build -up of the fan guard. (Air enters the fan and discharges out each side of the coil).

TXV SELECTION (thermostatic expansion valve)

For normal operating conditions refer to the TXV selection chart. When selecting valves ensure they are sized to meet the capacity at the actual evaporating temperature, liquid temperature and operating TD of the system . All these conditions can greatly affect the size and selection. Consult the factory or valve manufacturer for assistance. All models that use a distributor (larger models) must use a nozzle. Smaller models do not have distributors or nozzles.
The TXV superheat setting should NOT be initially adjusted . After the room has reached or is close to the required operating temperature the TXV superheat should then be checked and only adjusted if necessary. Refer to Section on SYSTEM CHECK.
To avoid overheating the valve or distributor wrap a wet cloth around the valve diaphragm and body.

MOUNTING

Mounting brackets with 7/32 - 5/16” diameter holes are provided for flush mounting to the ceiling.
Ensure the evaporator is located correctly with the air flowing in the two desired directions. Avoid discharging the air directly on to glass doors or door openings.
After mounting the coil ***check the slope*** of the drain pan with a level. If the ceiling is not level the drain pan slope may not be correct which can result in defrosting (ice-up) problems.

DRAIN LINE

The drain line should be run from the drain connection, sloping at least 4" vertical drop for every foot of horizontal distance . A trap outside the room will allow proper draining throughout the line. Connection should be made to proper drainage facilities that comply with local codes and regulations.

In freezers, to prevent drain line freeze up problems, the line must be heated and insulated. A heat input of 20 W per foot in a 0°F room and 30 W per foot in a -20°F room is usually satisfactory. Once the line has been completed , double check the slope in the drain pan to ensure proper drainage (prevention of ice build-up on pan).

PIPING

Refrigerant line sizes are important and are not necessarily the same size as the connections at the condensing unit or evaporator. If in doubt refer to a recognized source. (Manufacturer's Engineering Manual, Ashrae Manuals, etc.)

WIRING

Wire system in accordance with local codes and regulations. A 36" cord is provided for single fan air defrost models (AD). Multiple fans have a junction terminal box for conduit connections.

When fan delay thermostats are installed the fans may not start up until the coil temperature reaches approximately 26°F. On initial start up it may be necessary to bypass (jumper) this control temporarily until the coil is cold enough.

SYSTEM CHECK

Before Start Up:

1. Ensure wiring is in accordance with codes.
2. Refrigerant lines are properly sized and routed.
3. Thorough leak check, evacuation and dehydration has been performed.
4. Drain line has been checked for free flow.

After Start Up:

1. Fan has been checked for correct air flow and no obstructions.
2. Expansion valve superheat has been checked for proper operation. (Superheat of the coil should be around 5 to 6°F for a 10°F TD.)

MAINTENANCE

The unit should be periodically inspected for any dirt or build up on the fin surface and cleaned if necessary with a soft whisk or brush.

The fan motor is permanently lubricated and should not require service.

PROJECT INFORMATION

System	
Model Number	Date of Start-Up
Serial Number	Service Contractor
Refrigerant	Phone
Electrical Supply	E-Mail

PRODUCT SUPPORT RESOURCES

 PRODUCT SUPPORT	*web:* **www.k-rp.com/ktl** *email:* **evaps@k-rp.com** *call:* **1-844-893-3222 x520**
 TROUBLESHOOTING	*email:* **troubleshooting@k-rp.com** *call:* **1-844-893-3222 x529**
 SERVICE PARTS	*web:* **www.k-rp.com/parts** *email:* **parts@k-rp.com** *call:* **1-844-893-3222 x520**
 WARRANTY	*web:* **www.k-rp.com/warranty** *email:* **warranty@k-rp.com** *call:* **1-844-893-3222 x501**
 ORDERS	*email:* **orders@k-rp.com** *call:* **1-844-893-3222 x501**
 SHIPPING	*email:* **shipping@k-rp.com** *call:* **1-844-893-3222 x503**

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