

## EA Series Evaporators

The **Karyer EA** series evaporators are specially designed for a wide variety of small to large commercial refrigeration applications such as coolrooms and freezer rooms.

The EA series evaporators have a professional and fresh white case finish that will compliment any installation project in the Australian marketplace.

These evaporators are designed with optimum tube diameters that ensure the smallest refrigerant charges coupled with maximum increased efficiency and excellent oil return.

The fin spacings offered have been selected to ensure a finely tuned balance that will provide trouble free operation with the most efficient cooling effect for correctly engineered applications.

- Medium Temperature: 4.2mm fin spacing
- Low Temperature: 7.0mm fin spacing

The three phase AC evaporator fan assemblies are **ebm** who are renowned worldwide for quality and reliability. These fan motors have been selected in 500mm diameters specifically to match what has been considered standard sizing and most commonly used for many years in the Australian market.

### The EA series standard features:

- Factory fitted with EVD-ice Z valves including Ultra Cap (except models EAM351A3500, EAM372A3500 & EAM440A4500)
- Stainless Steel fittings (screws, nuts & bolts etc)
- White powder coated aluminium case panels
- White powder coated mounting feet
- Standard coils are designed for multiple refrigerants
- High performance circuitry with Venturi-type distributor technology
- Aluminium fins and high-performance copper tube for excellent heat transfer
- Fin spacings for specific applications (Medium temp: 4.2mm / Low temp: 7.0mm)
- Access doors aluminium powder coated on both ends - hinged and removable
- Quality defrost heaters to ensure efficient defrost - low temp models only
- Two wire defrost heater safety termination thermostats (5.0amp) - low temp models only
- High quality three phase 500mm ebm AC fan motor assemblies
- Fan motors and defrost heaters pre-wired back to electrical connection boxes



# KARYER EA SERIES EVAPORATORS

## Medium Temperature Evaporators

Fan Diameter: 500mm

Based on -4°C Saturated Suction Temperature

Fin Spacing: 4.2mm

Model		EAM090A1500EVD	EAM110A1500EVD	EAM123A1500EVD	EAM184A2500EVD	EAM221A2500EVD
R134A	Watts 6ktd	8370	10074	11382	16944	20400
	Watts 1ktd	1395	1679	1897	2824	3400
R515B	Watts 6ktd	818	9852	11130	16572	19950
	Watts 1ktd	1364	1642	1855	2762	3325
R513A	Watts 6ktd	8190	9858	11130	16578	19956
	Watts 1ktd	1365	1643	1855	2763	3326
R404A	Watts 6ktd	9096	10951	12372	18420	22170
	Watts 1ktd	1516	1825	2062	3070	3695
R507	Watts 6ktd	8826	10626	11994	17868	21504
	Watts 1ktd	1471	1771	1999	2978	3584
R449A & R452A	Watts 6ktd	8646	10404	11754	17502	21060
	Watts 1ktd	1441	1734	1959	2917	3510
R448A	Watts 6ktd	8736	10512	11874	17682	21282
	Watts 1ktd	1456	1752	1979	2947	3547
Air Flow	(m <sup>3</sup> /hr)	7512	6828	6263	15024	13657
Air Throw	(metres)	19.3	17.5	16.1	21.2	19.3
500mm Fans	(Qty)	1	1	1	2	2
400/3/50Hz AC (Δ Delta) Fan Motors	Total Watts	840	840	840	1680	1680
	Total Amps	1.45	1.45	1.45	2.9	2.9
Outlet Connection	( Ø )	28mm	22mm	35mm	28mm	35mm
Inlet Connection	( Ø )	5/8"	5/8"	5/8"	5/8"	19mm
Tube Volume	(dm <sup>3</sup> )	7.0	10.5	13.8	14.0	21.0
Dry Weight	(kg)	46.0	55.0	65.0	80.0	99.0
Sound Pressure	dB(A)/3m	60	60	61	63	63
Sound Power Level	(dB)	82	82	83	85	85
Overall Dimensions (mm)	Width	1157	1157	1157	2007	2007
	Depth (incl. pipes & fan)	580 ±5	630 ±5	730 ±5	580 ±5	630 ±5
	Height (without drain)	691	691	691	691	691
Dimension Diagram		D10	D10	D10	D11	D11

# KARYER EA SERIES EVAPORATORS

## Medium Temperature Evaporators (cont'd)

Fan Diameter: 500mm

Based on -4°C Saturated Suction Temperature

Fin Spacing: 4.2mm

Model		EAM259A3500EVD	* EAM351A3500	* EAM372A3500	* EAM440A4500
R134A	Watts 6ktd	23838	32359	34254	40506
	Watts 1ktd	3973	5393	5709	6751
R515B	Watts 6ktd	23316	31644	33498	39612
	Watts 1ktd	3886	5274	5583	6602
R513A	Watts 6ktd	23316	31650	33510	39624
	Watts 1ktd	3886	5275	5585	6604
R404A	Watts 6ktd	25908	35166	37236	44028
	Watts 1ktd	4318	5861	6206	7338
R507	Watts 6ktd	25134	34110	36114	42708
	Watts 1ktd	4189	5685	6019	7118
R449A & R452A	Watts 6ktd	24612	33408	35370	41826
	Watts 1ktd	4102	5568	5895	6971
R448A	Watts 6ktd	24870	33762	35742	42264
	Watts 1ktd	4145	5627	5957	7044
Air Flow	(m <sup>3</sup> /hr)	22536	20485	18788	27314
Air Throw	(metres)	22.2	20.1	18.5	21.0
500mm Fans	(Qty)	3	3	3	4
400/3/50Hz AC (Δ Delta) Fan Motors	Total Watts	2520	2520	2520	3360
	Total Amps	4.35	4.35	4.35	5.8
Outlet Connection	( Ø )	35mm	42mm	54mm	54mm
Inlet Connection	( Ø )	19mm	5/8"	5/8"	5/8"
Tube Volume	(dm <sup>3</sup> )	21.0	31.5	41.3	42.0
Dry Weight	(kg)	124.0	152.0	183.0	198.0
Sound Pressure	dB(A)/3m	65	65	65	65
Sound Power Level	(dB)	87	87	88	88
Overall Dimensions (mm)	Width	2857	2857	2857	3707
	Depth (incl. pipes & fan)	630 ±5	630 ±5	730 ±5	630 ±5
	Height (without drain)	721	721	721	721
Dimension Diagram		D12	D12	D12	D13

\* Note: EAM351A3500, EAM372A3500 & EAM440A4500 models are not supplied with EVD-ice & require TX valves to be fitted.

# KARYER EA SERIES EVAPORATORS

## Low Temperature Evaporators

Fan Diameter: 500mm

Based on -24°C Saturated Suction Temperature

Fin Spacing: 7.0mm

Model		EAL084E1500EVD	EAL116E2500EVD	EAL153E2500EVD	EAL185E2500EVD
R404A	Watts 6ktd	8436	11634	15366	18528
	Watts 1ktd	1406	1939	2561	3088
R507	Watts 6ktd	8184	11292	14904	17970
	Watts 1ktd	1364	1882	2484	2995
R449A & R452A	Watts 6ktd	7932	10938	14448	17418
	Watts 1ktd	1322	1823	2408	2903
R448A	Watts 6ktd	8016	11052	14598	17598
	Watts 1ktd	1336	1842	2433	2933
Air Flow	(m <sup>3</sup> /hr)	6797	15749	14582	13594
Air Throw	(metres)	17.4	22.2	20.6	19.2
500mm Fans	(Qty)	1	2	2	2
400/3/50Hz AC (Δ Delta) Fan Motors	Total Watts	840	1680	1680	1680
	Total Amps	1.45	2.9	2.9	2.9
*230/1/50Hz Defrost Heaters	Total Watts	8536	10175	16280	16280
	Total Amps	36.8	44.0	70.4	70.4
Outlet Connection	( Ø )	35mm	35mm	42mm	54mm
Inlet Connection	( Ø )	5/8"	5/8"	5/8"	19mm
Tube Volume	(dm <sup>3</sup> )	14.0	14.0	21.0	28.0
Dry Weight	(kg)	69.0	86.0	105.0	124.0
Sound Pressure	dB(A)/3m	60	64	63	63
Sound Power Level	(dB)	82	86	85	85
Overall Dimensions (mm)	Width	1217	2067	2067	2067
	Depth (incl. pipes & fan)	730 ±5	580 ±5	630 ±5	730 ±5
	Height (without drain)	691	691	691	691
Dimension Diagram		D10	D11	D11	D11
Defrost Wiring Diagram		DHW02	DHW01	DHW02	DHW02

Defrost Heaters are factory pre-wired to the junction box and split over 3 phases – contractors should re-wire to suit their preferred wiring layout.

Note: Defrost safety termination thermostat supplied with low temp evaporators are rated @ 5.0 amps – use only in defrost heater control circuit.

# KARYER EA SERIES EVAPORATORS

## Low Temperature Evaporators (cont'd)

Fan Diameter: 500mm

Based on -24°C Saturated Suction Temperature

Fin Spacing: 7.0mm

Model		EAL226E3500EVD	EAL272E3500EVD	EAL308E4500EVD	EAL348E4500EVD
R404A	Watts 6ktd	22602	27222	30816	34824
	Watts 1ktd	3767	4537	5136	5804
R507	Watts 6ktd	21924	26400	29892	33774
	Watts 1ktd	3654	4400	4982	5629
R449A & R452A	Watts 6ktd	21246	25590	28968	32736
	Watts 1ktd	3541	4265	4828	5456
R448A	Watts 6ktd	21474	25860	29280	33084
	Watts 1ktd	3579	4310	4880	5514
Air Flow	(m <sup>3</sup> /hr)	21873	20391	29163	27188
Air Throw	(metres)	21.5	20.1	22.5	20.9
500mm Fans	(Qty)	3	3	4	4
400/3/50Hz AC (Δ Delta) Fan Motors	Total Watts	2520	2520	3360	3360
	Total Amps	4.35	4.35	5.8	5.8
*230/1/50Hz Defrost Heaters	Total Watts	23760	23760	30800	30800
	Total Amps	102.0	102.0	133.0	133.0
Outlet Connection	( Ø )	54mm	54mm	54mm	54mm
Inlet Connection	( Ø )	19mm	19mm	19mm	19mm
Tube Volume	(dm <sup>3</sup> )	31.5	41.3	42.0	55.1
Dry Weight	(kg)	161.0	186.0	207.0	243.0
Sound Pressure	dB(A)/3m	65	65	65	65
Sound Power Level	(dB)	87	87	88	88
Overall Dimensions (mm)	Width	2917	2917	3767	3767
	Depth (incl. pipes & fan)	630 ±5	730 ±5	630 ±5	730 ±5
	Height (without drain)	721	721	721	721
Dimension Diagram		D12	D12	D13	D13
Defrost Wiring Diagram		DHW02	DHW02	DHW02	DHW02

Defrost Heaters are factory pre-wired to the junction box and split over 3 phases – contractors should re-wire to suit their preferred wiring layout.

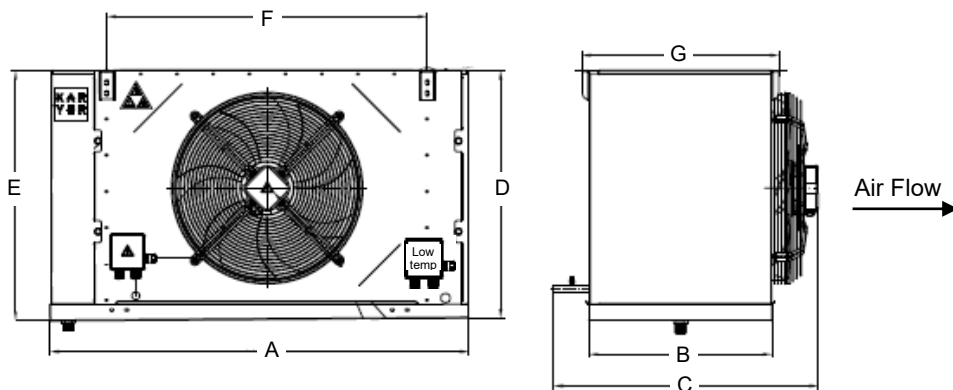
Note: Defrost safety termination thermostat supplied with low temp evaporators are rated @ 5.0 amps – use only in defrost heater control circuit.

# KARYER EA SERIES EVAPORATORS

## Evaporator Dimensions

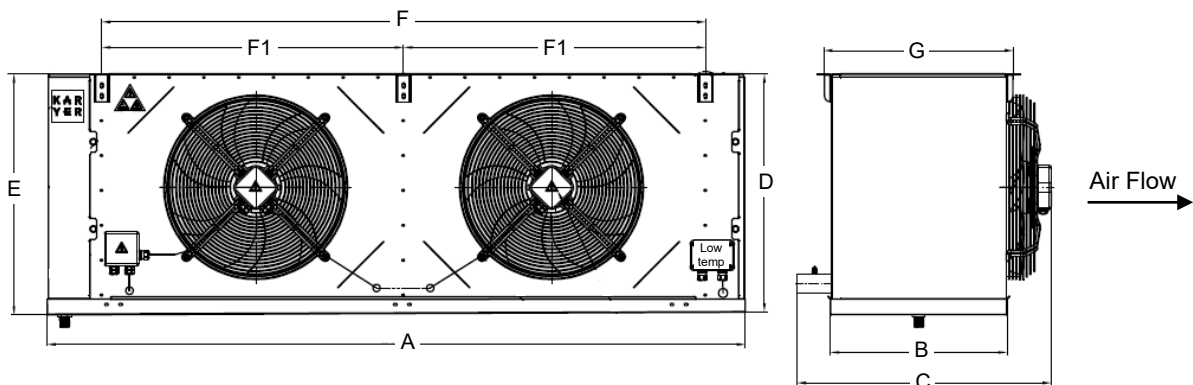
**Dimension Diagram: D10**

Evaporator Model (1 x 500mm Fan)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Drain Connection
<b>Medium Temperature</b>								
EAM090A1500EVD	1157	357	580 ±5	683	691	885	395	R1 1/4" Thread (32mm ID Ø)
EAM110A1500EVD	1157	407	630 ±5	683	691	885	445	R1 1/4" Thread (32mm ID Ø)
EAM123A1500EVD	1157	507	730 ±5	683	691	885	545	R1 1/4" Thread (32mm ID Ø)
<b>Low Temperature</b>								
EAL084E1500EVD	1217	507	730 ±5	683	691	885	545	R1 1/4" Thread (32mm ID Ø)



**Dimension Diagram: D11**

Evaporator Model (2 x 500mm Fans)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	F1 (mm)	G (mm)	Drain Connection
<b>Medium Temperature</b>									
EAM184A2500EVD	2007	357	580 ±5	683	691	1735	867.5	395	R1 1/4" Thread (32mm ID Ø)
EAM221A2500EVD	2007	407	630 ±5	683	691	1735	867.5	445	R1 1/4" Thread (32mm ID Ø)
<b>Low Temperature</b>									
EAL116E2500EVD	2067	357	580 ±5	683	691	1735	867.5	395	R1 1/4" Thread (32mm ID Ø)
EAL153E2500EVD	2067	407	630 ±5	683	691	1735	867.5	445	R1 1/4" Thread (32mm ID Ø)
EAL185E2500EVD	2067	507	730 ±5	683	691	1735	867.5	545	R1 1/4" Thread (32mm ID Ø)



# KARYER EA SERIES EVAPORATORS

## Evaporator Dimensions (cont'd)

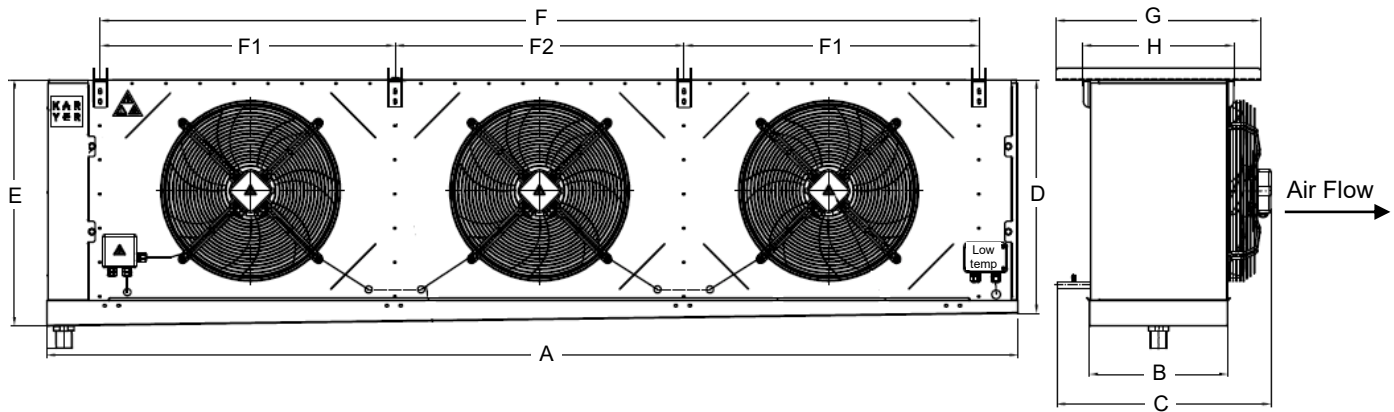
Dimension Diagram: D12											
Evaporator Model (3 x 500mm Fans)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	F1 (mm)	F2 (mm)	G (mm)	H (mm)	Drain Connection

### Medium Temperature

EAM259A3500EVD	2857	357	580 ±5	683	721	2585	867.5	850	550	395	R1 1/2" Thread (40mm ID Ø)
EAM351A3500	2857	407	630 ±5	683	721	2585	867.5	850	600	445	R1 1/2" Thread (40mm ID Ø)
EAM372A3500	2857	507	721 ±5	683	721	2585	867.5	850	627	587	R1 1/2" Thread (40mm ID Ø)

### Low Temperature

EAL226E3500EVD	2917	407	630 ±5	683	721	2585	867.5	850	600	445	R1 1/2" Thread (40mm ID Ø)
EAL272E3500EVD	2917	507	730 ±5	683	721	2585	867.5	850	700	545	R1 1/2" Thread (40mm ID Ø)



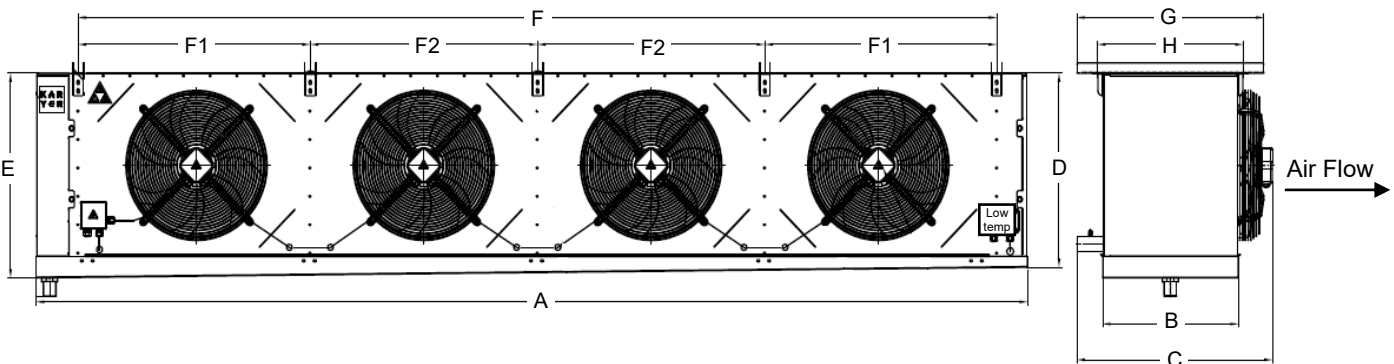
Dimension Diagram: D13											
Evaporator Model (4 x 500mm Fans)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	F1 (mm)	F2 (mm)	G (mm)	H (mm)	Drain Connection

### Medium Temperature

EAM440A4500	3707	407	630 ±5	683	721	3435	867.5	850	600	445	R1 1/2" Thread (40mm ID Ø)
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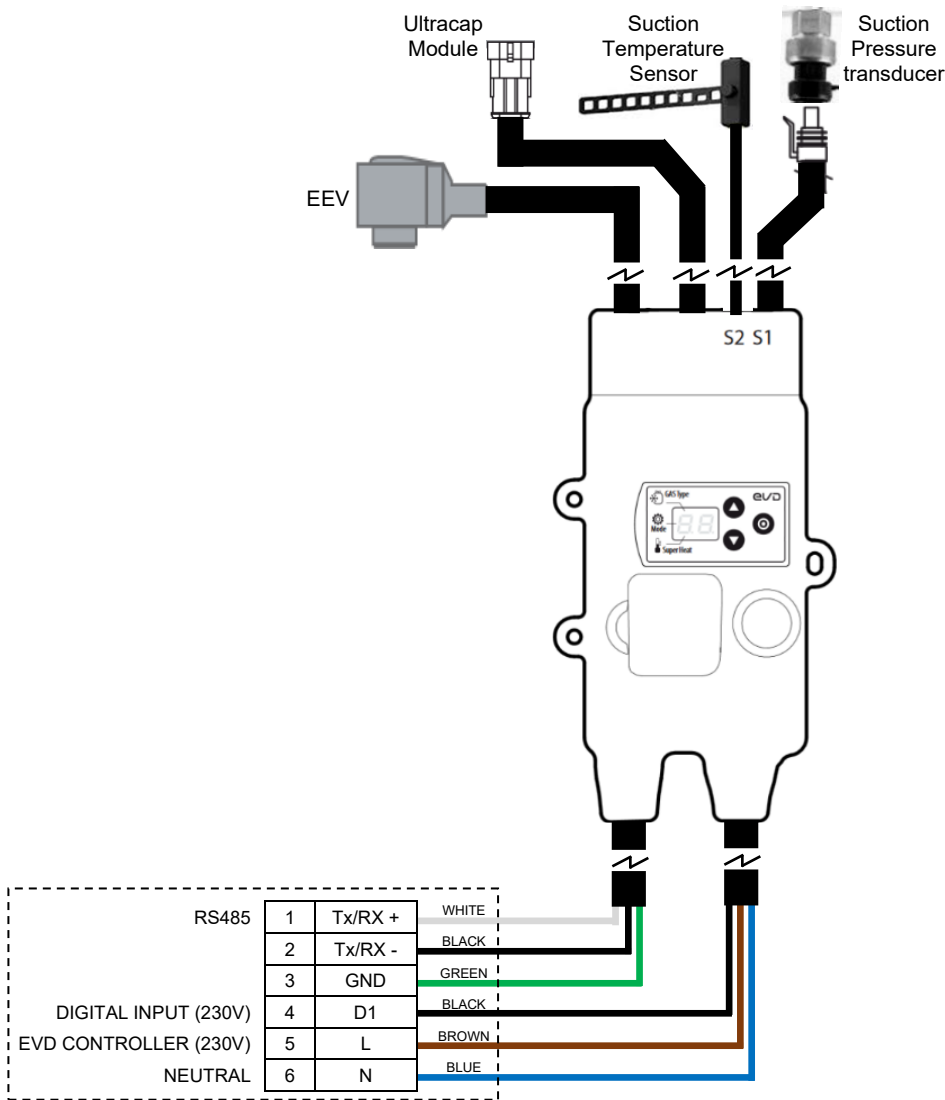
### Low Temperature

EAL308E4500EVD	3767	407	630 ±5	683	721	3435	867.5	850	527	487	R1 1/2" Thread (40mm ID Ø)
EAL348E4500EVD	3767	507	730 ±5	683	721	3435	867.5	850	700	545	R1 1/2" Thread (40mm ID Ø)

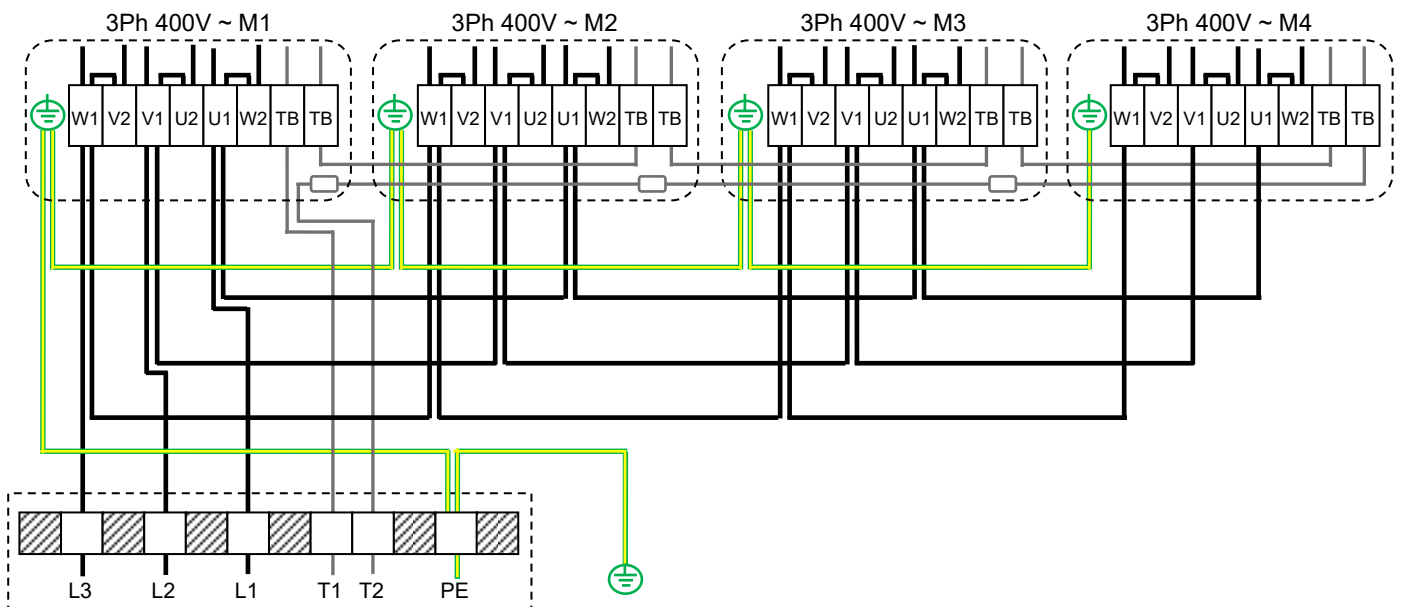


# KARYER EA SERIES EVAPORATORS

## Evaporator EVD-ice Wiring - Factory Wiring



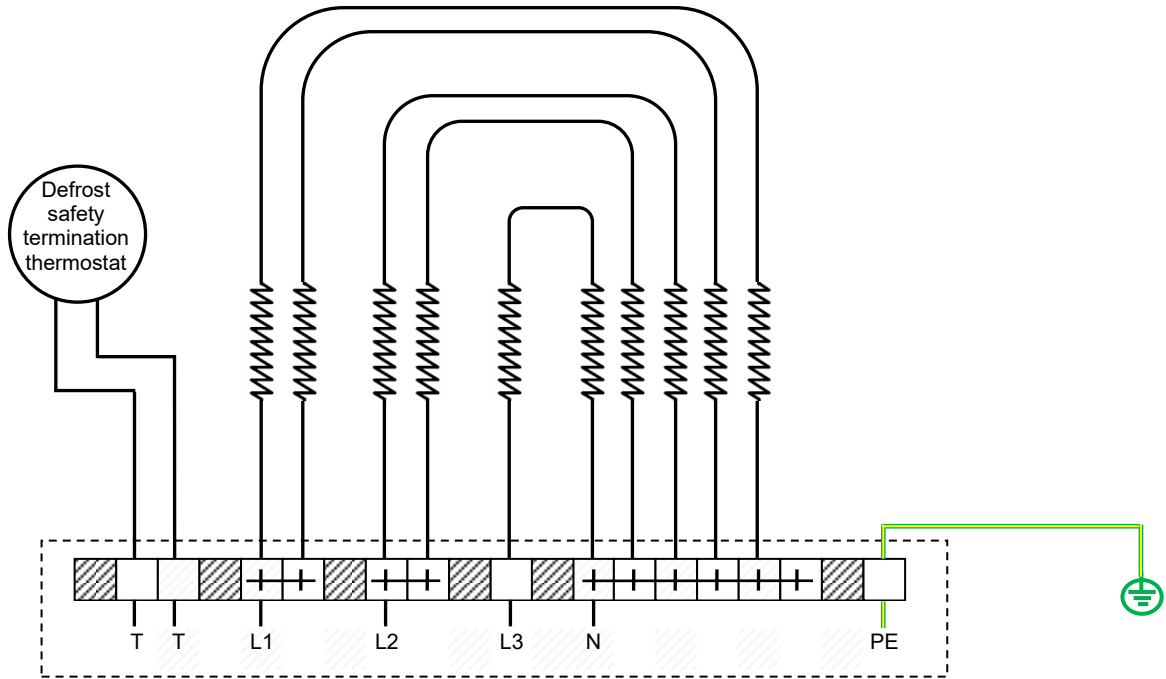
## Evaporator Fan Motor - Factory Wiring



# KARYER EA SERIES EVAPORATORS

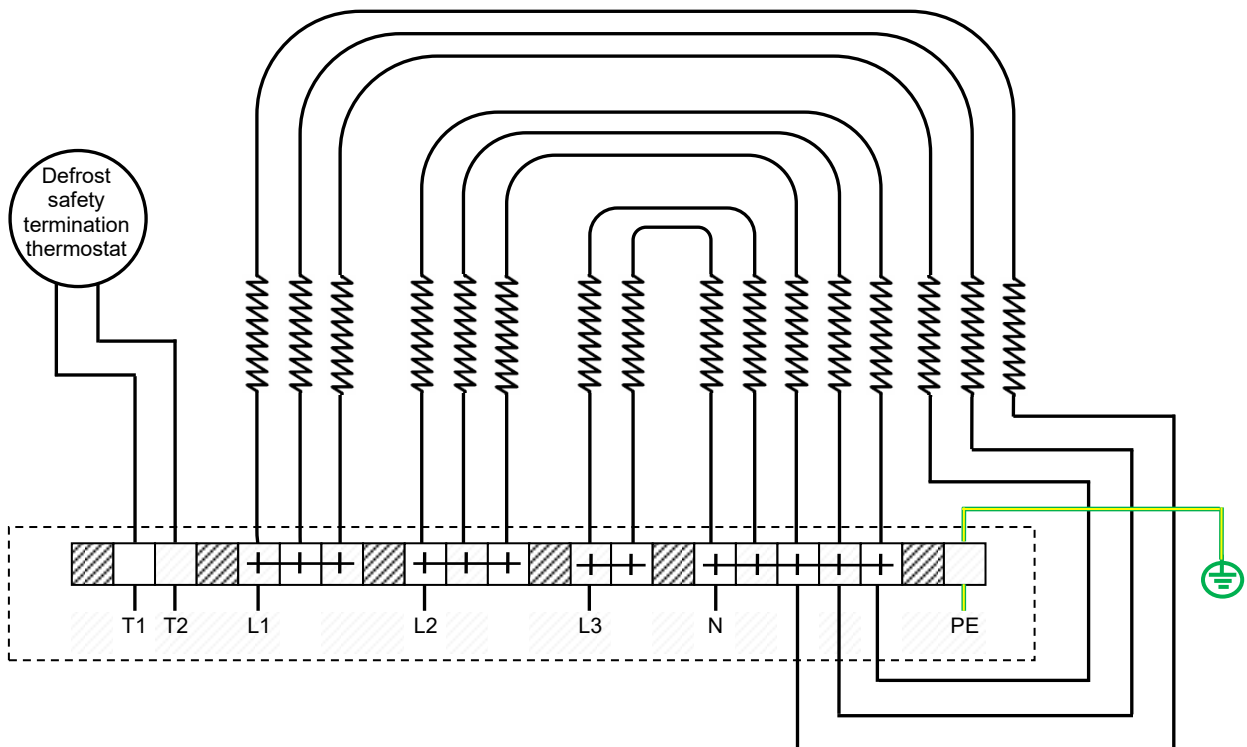
## Evaporator Defrost Heater - Factory Wiring

Wiring Diagram: DHW01



## Evaporator Defrost Heater - Factory Wiring

Wiring Diagram: DHW02



Note: Defrost safety termination thermostats are rated @ 5.0 amps – use only in defrost heater control circuit.

# KARYER EA SERIES EVAPORATORS

## Shipping Dimensions & Weights

Medium Temperature - Shipping Dimensions & Weights				
Medium Temperature Evaporator Models	Shipping Packaged Dimensions (mm)			Shipping Weight (Kg)
	Depth	Width	Height	
EAM090A1500EVD	610	1230	900	63.0
EAM110A1500EVD	710	1230	900	72.0
EAM123A1500EVD	810	1230	900	87.0
EAM184A2500EVD	660	2080	900	111.0
EAM221A2500EVD	710	2080	900	129.0
EAM259A3500EVD	660	2930	960	167.0
EAM351A3500	720	2930	960	197.0
EAM372A3500	81	2930	960	228.0
EAM440A4500	720	3780	960	255.0

Low Temperature - Shipping Dimensions & Weights				
Low Temperature Evaporator Models	Shipping Packaged Dimensions (mm)			Shipping Weight (Kg)
	Depth	Width	Height	
EAL084E1500EVD	810	1290	900	91.0
EAL116E2500EVD	660	2140	900	116.0
EAL153E2500EVD	710	2140	900	133.0
EAL185E2500EVD	810	2140	900	157.0
EAL226E3500EVD	710	2990	950	203.0
EAL272E3500EVD	810	2990	950	232.0
EAL308E4500EVD	720	2990	950	236.0
EAL348E4500EVD	810	3840	950	303.0



# KARYER EA SERIES EVAPORATORS

## Spare Parts - Medium Temperature

Medium Temperature Evaporator Models	ebm Fan Motors (Australian Stocked Replacements)	Drain Pan	Two Hinge Side Panels	
			Header Side	Opposite Side (non-header side)
EAM090A1500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D140442	D140426	D140427
EAM110A1500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D140443	D140463	D140465
EAM123A1500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D136724	D136721	D136722
EAM184A2500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D140445	D140426	D140427
EAM221A2500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D140446	D140463	D140465
EAM259A3500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D140448	D140426	D140427
EAM351A3500	S4D500AM0301 (original motor: S4D500-AE03-01)	D140449	D140463	D140465
EAM372A3500	S4D500AM0301 (original motor: S4D500-AE03-01)	D140450	D140464	D140466
EAM440A4500	S4D500AM0301 (original motor: S4D500-AE03-01)	D140452	D140463	D140465

Medium Temperature Evaporator Models	EVD-ice Valves				
	Valve Cartridge	Driver Module	Ultracap Resin Module	Replacement Motor / Stator	Pressure Transmitter
EAM090A1500EVD	E2VATT30Z0	EVDM011S60	EVDMU00R10	E2VSTA0330	SPKT0013P3
EAM110A1500EVD	E2VATT30Z0	EVDM011S60	EVDMU00R10	E2VSTA0330	SPKT0013P3
EAM123A1500EVD	E2VATT35Z0	EVDM011S60	EVDMU00R10	E2VSTA0330	SPKT0013P3
EAM184A2500EVD	E3V45SWR70 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3
EAM221A2500EVD	E3V55SWRC0 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3
EAM259A3500EVD	E3V55SWRC0 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3

\* Note: EAM351A3500, EAM372A3500 & EAM440A4500 models are not supplied with EVD-ice & require TX valves to be fitted



# KARYER EA SERIES EVAPORATORS

## Spare Parts - Low Temperature

Low Temperature Evaporator Models	ebm Fan Motors (Australian Stocked Replacements)	**Defrost Safety Termination Thermostat	Defrost Heater Sets (There are 2 x heaters wired in series per set)			
			Coil Heater Set	Set Qty	Pan Heater Set	Set Qty
EAL084E1500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90647	6	D90647	2
EAL116E2500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90059	4	D90059	1
EAL153E2500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90059	6	D90059	2
EAL185E2500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90059	6	D90059	2
EAL226E3500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90612	6	D90612	2
EAL272E3500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90612	6	D90612	2
EAL308E4500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90659	6	D90659	2
EAL348E4500EVD	S4D500AM0301 (original motor: S4D500-AE03-01)	D92041	D90659	6	D90659	2

\*\*Note: Defrost heater safety termination thermostat fitted to low temp evaps are rated @ 5.0 amps – use only in defrost heater control circuit.

Low Temperature Evaporator Models	EVD-ice Valves					Drain Pan	Two Hinge Side Panels	
	Valve Cartridge	Driver Module	Ultracap Resin Module	Replacement Motor / Stator	Pressure Transmitter		Header Side	Opposite Side (non-header)
EAL084E1500EVD	E2VATT24Z0	EVDM011S60	EVDMU00R10	E2VSTA0330	SPKT0013P3	D140444	D140464	D140466
EAL116E2500EVD	E2VATT30Z0	EVDM011S60	EVDMU00R10	E2VSTA0330	SPKT0013P3	D140445	D140426	D140427
EAL153E2500EVD	E2VATT35Z0	EVDM011S60	EVDMU00R10	E2VSTA0330	SPKT0013P3	D140446	D140463	D140465
EAL185E2500EVD	E3V45SWR70 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3	D140447	D140464	D140465
EAL226E3500EVD	E3V55SWRC0 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3	D140449	D140463	D140465
EAL272E3500EVD	E3V55SWRC0 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3	D140500	D140464	D140466
EAL308E4500EVD	E3V55SWRC0 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3	D140452	D140463	D140465
EAL348E4500EVD	E3V55SWRC0 (hermetic E3V)	EVDM011S60	EVDMU00R10	E3VSTA0350	SPKT0013P3	D140453	D140464	D140466

