

Evaporator E3 Series



Medium & Low Temperature Models

GREENHALGH

Innovative Refrigeration Solutions

APPLICATION BENEFITS / FEATURES

HIGH EFFICIENCY HEAT EXCHANGER COIL

- Capacity steps in the range are compatible with popular compressor capacities
- Optimised with inner grooved tube and designed to maximise the sensible capacity and minimise latent heat and frost losses
- Hydrophilic blue aluminium fins
- Leak tested at 3100 kPa pressure
- 4.2mm fin spacing for medium temperature applications above 0°C
- 6.0mm fin spacing for low temperature applications below 0°C

STATE OF THE ART DESIGN SOFTWARE

- Greenhalgh thermodynamic & aerodynamic design software was developed, tested and proved in Germany and assures accurate designs

FANS

- Energy efficient fans
- Fan nozzle designed for maximum air flow and air throw with reduced power input
- Ziehl Abegg fan motors as standard
- Motor protection to IP54 and insulation to class F
- Three phase fans as standard in this series: 415V/3/50Hz
- Wiring to AS/NZS standards



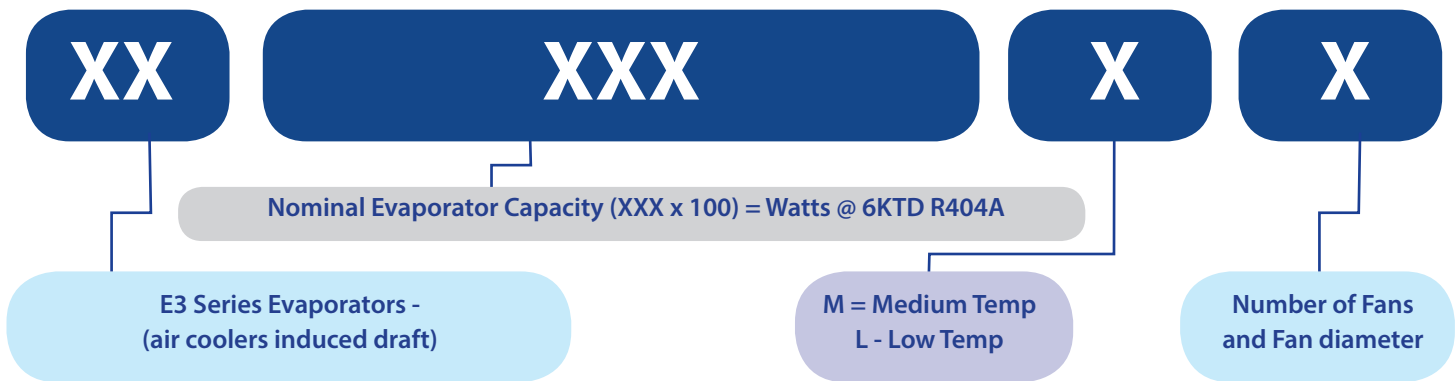
DEFROST

- Designed to provide fast ice removal even after an 12 hour humid refrigeration cycle
- The electrical defrost element wattage is designed to remove ice from the evaporator fins without causing steam to be generated
- The robust stainless steel electric defrost elements with high insulation cable connections meet UL-SA5102 and CSA-LR19489 standards
- Factory tested at full load
- The defrost elements are wired to a terminal box suitable for moist conditions (IP66) at low temperature (tested at -40°C)

OPTIONS AVAILABLE

- Customised fin spacing
- Coils for glycol applications
- Customised thermostatic expansion valve can be factory fitted by prior arrangement
- CO2 range for low temperature applications
- Overheat Klixon protection
- Customised EC fan motors and frequency options
- Single phase fan motors
- Customised solutions with fan selection

NOMENCLATURE GREENHALGH EVAPORATORS



Example: E3-487-M/1.45

Nomenclature

- E3 = Series
- 487 = Capacity x 10 in Watts on R404A @ 6KTD
- M = Medium temp
- 1 = Number of Fans
- 45 = Fan diameter x 10 in mm (450mm)

PERFORMANCE CORRECTION FACTORS

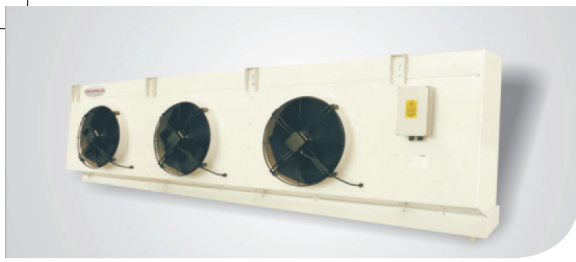
TABLE F1- For capacity calculation at varying evaporator temperatures

(MEDIUM TEMPERATURE) COOLROOM EVAPORATOR TEMPERATURE CAPACITY CORRECTION FACTORS							
F.1	EVAPORATOR TEMPERATURE	-10°C	-8°C	-5°C	-4°C	0°C	+5°C
	MULTIPLICATION FACTOR	0.957	0.98	0.99	1.0	1.021	1.04

(LOW TEMPERATURE) FREEZER ROOM EVAPORATOR TEMPERATURE CAPACITY CORRECTION FACTORS									
F.1	EVAPORATOR TEMPERATURE	-35°C	-30°C	-28°C	-25°C	-24°C	-20°C	-15°C	-10°C
	MULTIPLICATION FACTOR	0.95	0.978	0.98	0.99	1.0	1.023	1.06	1.08

CORRECTED EVAPORATOR CAPACITY =

$$\text{RATED EVAPORATOR CAPACITY in Watts} \times \text{F.1}$$



E3 MEDIUM TEMPERATURE SERIES

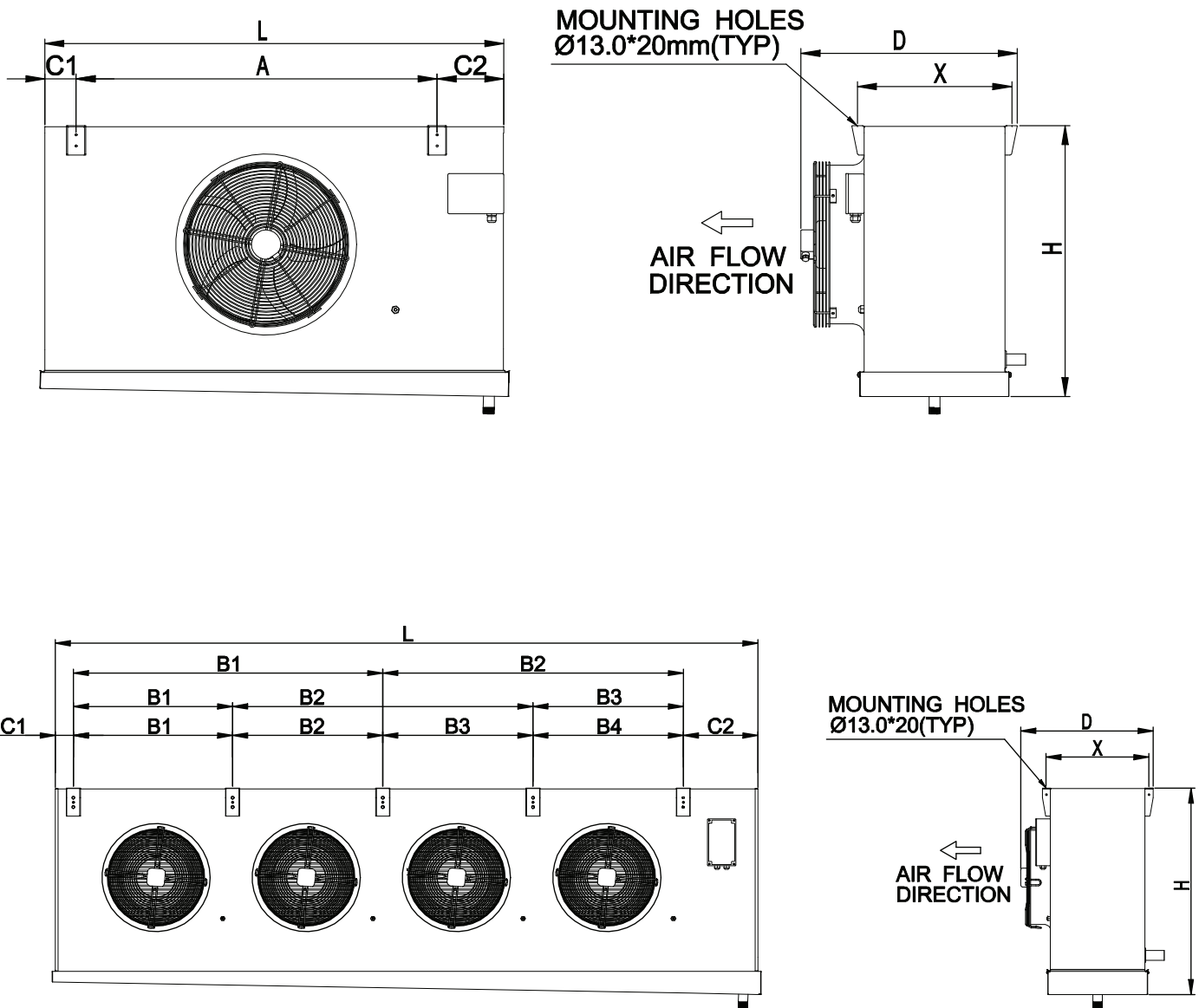
Model	Capacity in Watts @ 6KTD			Air Flow		Fan Motors				Defrost Heater	Weight (kg)	Connections				Dimensions (mm)		
	R404A	R22	R134A	l/s	Air Throw (m)	Fan Qty x Ømm	Amps	Watts	Power Supply	Watts		Inlet (mm)	Outlet (mm)	Ext Equaliser	Drain	Length 'L'	Depth 'D'	Height 'H'
E3 - MEDIUM TEMPERATURE SERIES (4.2mm FIN SPACING - 6FPI)																		
E3-487-M/1.45	4870	4600	4640	1718	15	1 x 450	1.05	540			50	16	22	6.35	NPT 1 1/2	1232	620	887
E3-605-M/1.45	6050	5690	5830	1676	15	1 x 450	1.05	540			55	16	22	6.35	NPT 1 1/2	1232	620	887
E3-697-M/1.45	6970	6530	6810	1633	15	1 x 450	1.05	540			61	16	28	6.35	NPT 1 1/2	1232	620	887
E3-881-M/1.50	8810	8270	8500	2049	18	1 x 500	1.45	790			78	16	28	6.35	NPT 1 1/2	1432	700	887
E3-997-M/1.50	9970	9350	9620	2003	18	1 x 500	1.45	790			90	16	28	6.35	NPT 1 1/2	1432	700	887
E3-1231-M/1.50	12310	11660	11310	1917	18	1 x 500	1.45	790			106	16	28	6.35	NPT 1 1/2	1432	700	887
E3-1217-M/2.45	12170	11450	11810	3353	16	2 x 450	2.10	1080			100	16	28	6.35	NPT 1 1/2	2132	620	887
E3-1402-M/2.45	14020	13110	13770	3266	16	2 x 450	2.10	1080			112	16	35	6.35	NPT 1 1/2	2132	620	887
E3-1748-M/2.50	17480	16590	16260	4006	20	2 x 500	2.90	1580			129	22	42	6.35	NPT 1 1/2	2175	700	887
E3-1964-M/2.50	19640	18590	18320	3901	20	2 x 500	2.90	1580			147	22	42	6.35	NPT 1 1/2	2375	700	887
E3-2222-M/3.50	22220	21050	20980	6185	22	3 x 500	4.35	2370			185	22	42	6.35	NPT 1 1/2	3228	700	951
E3-2601-M/3.50	26010	24580	24690	6027	22	3 x 500	4.35	2370			198	22	54	6.35	NPT 1 1/2	3228	700	951
E3-2909-M/3.50	29090	27390	27820	5872	22	3 x 500	4.35	2370			215	22	54	6.35	NPT 1 1/2	3228	700	951
E3-3622-M/4.50	36220	34680	32360	8014	23	4 x 500	5.80	3160			236	22	54	6.35	NPT 1 1/2	3630	700	1100
E3-4032-M/4.50	40320	38410	36650	7804	23	4 x 500	5.80	3160			259	22	54	6.35	NPT 1 1/2	3630	700	1100
E3-4648-M/4.50	46480	43920	43240	7405	23	4 x 500	5.80	3160			314	22 x 2	54	6.35	NPT 1 1/2	3630	700	1100
E3-5325-M/3.63	53250	50390	50260	14578	34	3 x 630	14.40	7800			401	28	54	6.35	NPT 1 1/2	4215	850	1600
E3-6209-M/3.63	62090	58480	59250	14335	34	3 x 630	14.40	7800			451	28	76	6.35	NPT 1 1/2	4215	850	1600
E3-6925-M/3.63	69250	64910	66820	14077	34	3 x 630	14.40	7800			505	28 x 2	76	6.35	NPT 1 1/2	4215	850	1600

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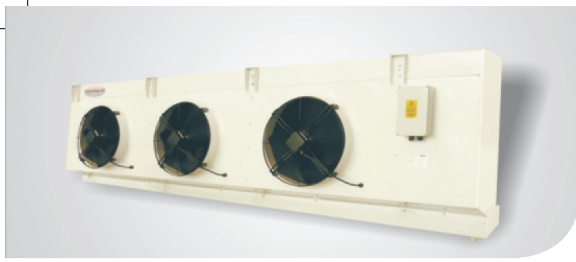
NO ELEMENTS AS STANDARD

- Capacities based on -4°C SST/ 6KTD for medium temperature models
- NOTE: Medium Temperature models are not fitted with defrost heater elements

Dimensions Diagram



• Detailed drawings for each model with full specifications available on request.



E3 LOW TEMPERATURE SERIES

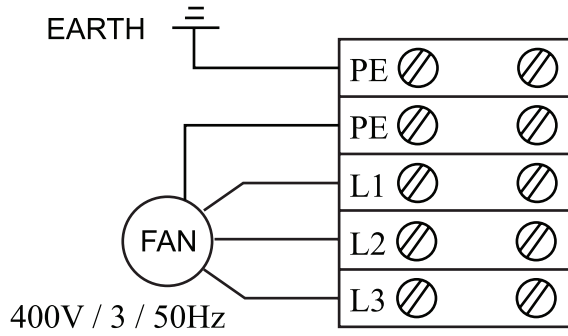
Model	Capacity in Watts @ 6KTD			Air Flow		Fan Motors				Defrost Heater Watts	Weight (kg)	Connections				Dimensions (mm)		
	R404A	R22	R134A	l/s	Air Throw (m)	Fan Qty x Ømm	Amps	Watts	Power Supply			Inlet (mm)	Outlet (mm)	Ext Equaliser	Drain	Length 'L'	Depth 'D'	Height 'H'
E3 - LOW TEMPERATURE SERIES (6.5mm FIN SPACING - 4FPI)																		
E3-345-L/1.45	3450	3360	3010	1350	15	1 x 450	1.05	540		2800	53	13	22	6.35	NPT1	1232	620	887
E3-443-L/1.45	4420	4290	3900	1598	15	1 x 450	1.05	540		2800	62	13	28	6.35	NPT1	1232	620	887
E3-520-L/1.45	5200	5030	4650	1569	15	1 x 450	1.05	790		2800	76	13	28	6.35	NPT1	1232	620	887
E3-649-L/1.50	6490	6290	5740	1960	18	1 x 500	1.45	790		4500	87	13	28	6.35	NPT1	1232	700	887
E3-742-L/1.50	7420	7170	6560	1927	18	1 x 500	1.45	790		4500	95	13	28	6.35	NPT1	1432	700	887
E3-869-L/1.50	8690	8340	8000	1865	18	1 x 500	1.45	790		4500	112	13	35	6.35	NPT1	1432	700	887
E3-894-L/2.45	8940	8660	7940	3196	16	2 x 450	2.10	1080		6000	110	16	35	6.35	NPT1	1432	620	887
E3-1049-L/2.45	10490	10130	9480	3138	16	2 x 450	2.10	1080		6000	122	16	35	6.35	NPT1	2132	620	887
E3-1257-L/2.50	12570	12230	10600	3850	20	2 x 500	2.10	1580		7000	143	16	35	6.35	NPT 1 1/2	2132	700	887
E3-1429-L/2.50	14290	13870	12110	3777	20	2 x 500	2.90	1580		7000	155	16	42	6.35	NPT 1 1/2	2375	700	887
E3-1601-L/3.50	16010	15570	13750	5909	22	3 x 500	4.35	2370		9800	192	22	42	6.35	NPT 1 1/2	3228	700	951
E3-1897-L/3.50	18970	18410	16420	5792	22	3 x 500	4.35	2370		9800	211	22	54	6.35	NPT 1 1/2	3228	700	951
E3-2154-L/3.50	21540	20840	18830	5680	22	3 x 500	4.35	3160		9800	226	22	54	6.35	NPT 1 1/2	3228	700	951
E3-2441-L/4.50	24410	23840	19870	7662	23	4 x 500	11.60	3160		11200	298	22	54	6.35	NPT 1 1/2	3630	780	1100
E3-2773-L/4.50	27730	26990	22960	7503	23	4 x 500	11.60	3160		11200	329	28	54	6.35	NPT 1 1/2	3630	780	1100
E3-3298-L/4.50	32980	31880	28260	7195	23	4 x 500	11.60	3160		11200	386	28	54	6.35	NPT 1 1/2	3630	780	1100
E3-3826-L/3.63	38560	37510	33040	1379	34	3 x 630	14.40	7800		12600	410	28	54	6.35	NPT 1 1/2	4215	850	1600
E3-4565-L/3.63	45650	44260	39680	13631	34	3 x 630	14.40	7800		18000	456	28	76	6.35	NPT 1 1/2	4215	850	1600
E3-5243-L/3.63	52430	50780	45380	13468	34	3 x 630	14.40	7800		18000	509	28 x 2	76	6.35	NPT 1 1/2	4215	850	1600

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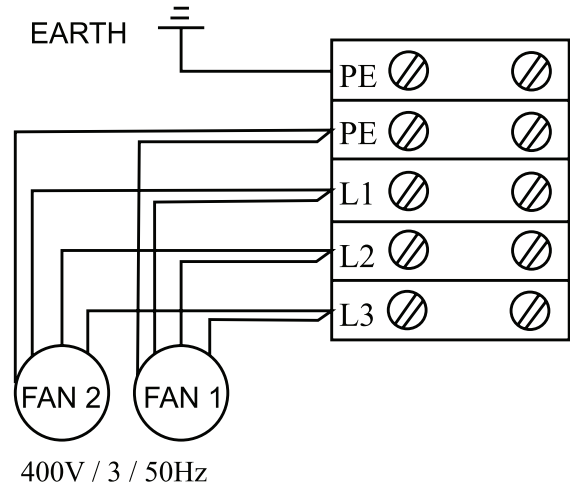
- Capacities based on -24° C SST/ 6KTD for low temperature models
- NOTE: Low Temperature evaporators are supplied with defrost elements fitted

Wiring Diagram

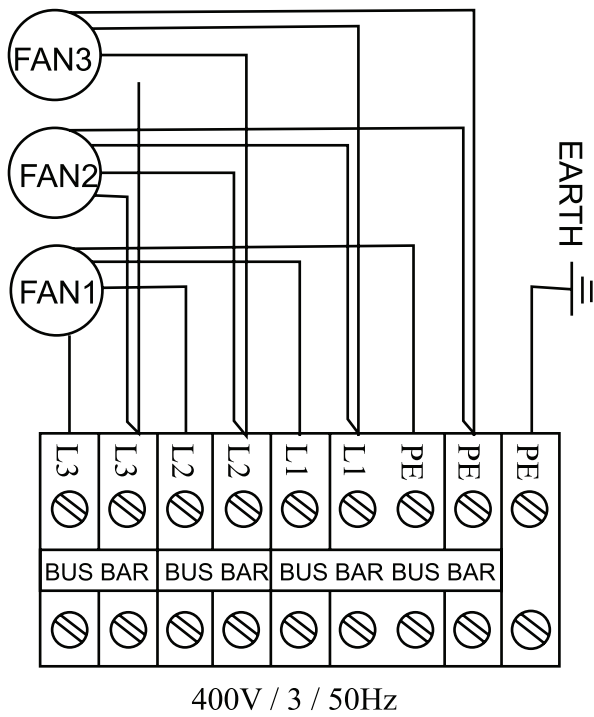
Suitable for: E3-487-M/1.45, E3-605-M/1.45, E3-697-M/1.45, E3881-M/1.50, 3-997-M/1.50, E3-1231-M/1.50



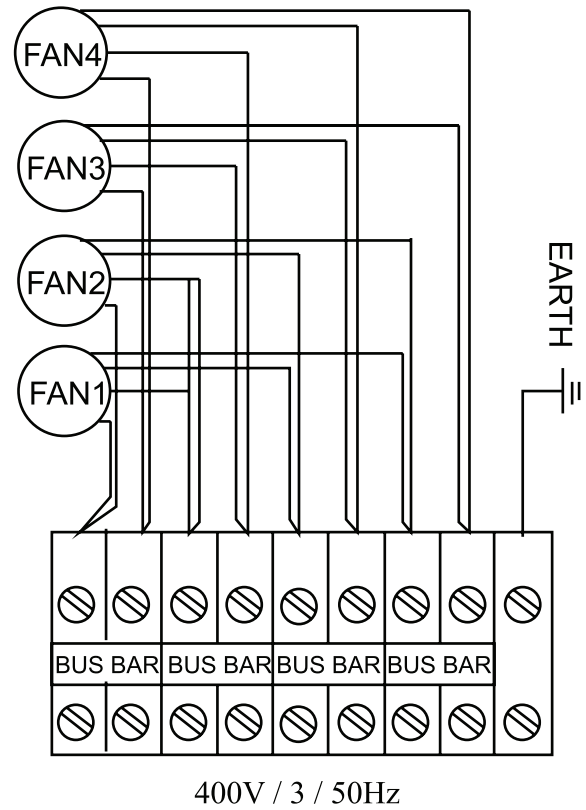
Suitable for: E3-1217-M/2.45, E3-1402-M/2.45, E3-1748-M/2.50, E3-1964-M/2.50



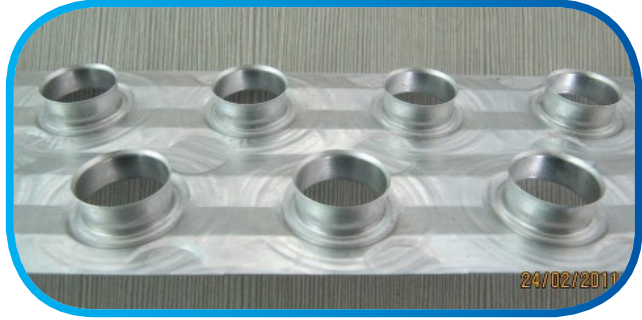
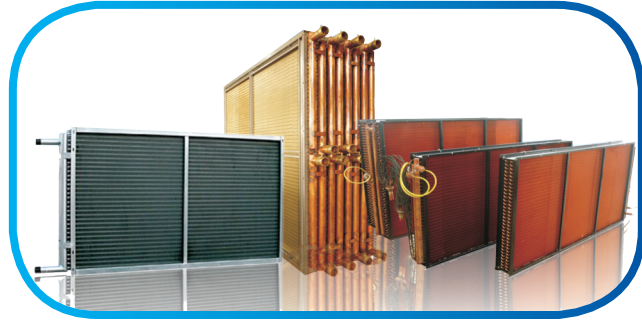
Suitable for: E3-2222-M/3.50, E3-2601-M/3.50, E3-2909-M/3.50, E3-5325-M/3.63, E6209-M/3.63, E3-6925-M/3.63



Suitable for: E3-3622-M/4.50, E3-4032-M/4.50, E3-4648-M/4.50



• Detailed drawings and wiring diagrams for each model with full specifications available on request.



RA REFRIGERATION
AGENCIES
AUSTRALIA

Ph +61 2 9792 5988

Issue: 04/14



Refrigeration Agencies Australia is a division of
Stareast International Pty Ltd

45 Bryant St, Padstow NSW 2211 Australia
Tel: +61 2 9792 5988 | Fax: +61 2 9792 5944
www.refrigerationagencies.com.au