

Evaporator E1 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 most 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
- Ebm Papst EC fan motors as standard
- Motor protection to IP54 and insulation to class F
- Compared to fans with AC motors, GreenTech EC motors from ebm-papst attain an efficiency of over 90%. This enables significant energy savings compared to conventional AC motors. In addition, GreenTech EC fans have controllable speed so it is possible to alter the air volume to meet respective requirements. The positive consequence is even more substantial energy savings. Thanks to the perfect interaction of motor, electronics and aerodynamics, the ebm-papst GreenTech EC fans not only make an impression with their energy efficiency, but also operate extremely quietly due to the optimised commutation technique and the aerodynamic design of the impellers. Other benefits include their reliability and durability.
- Power Supply: Single phase fans as standard in this series: 240V/1/50Hz
- Wiring to AS/NZS 3000 standards

ebmpapst



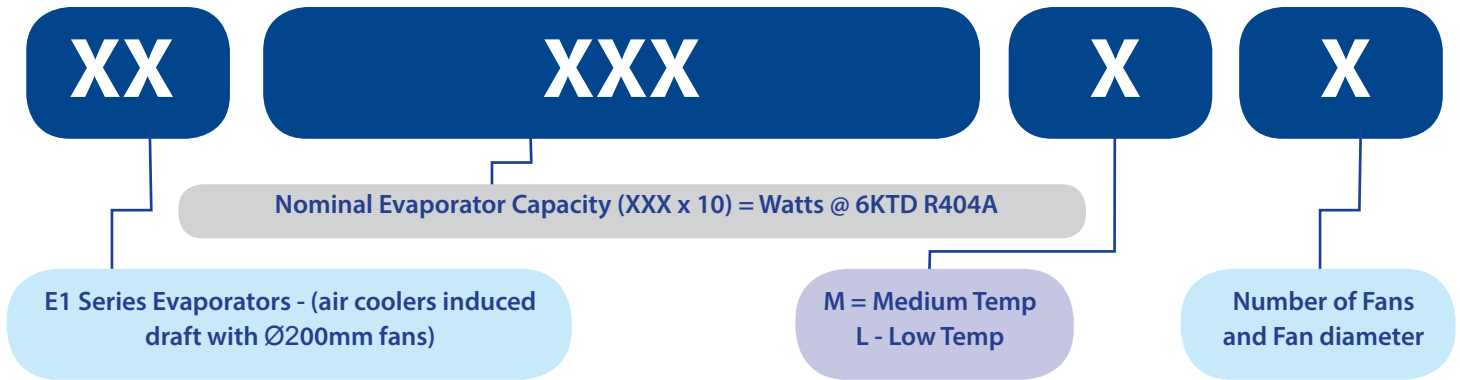
DEFROST

- Designed to provide fast ice removal, even after a 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

OPTIONS AVAILABLE

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

NOMENCLATURE GREENHALGH EVAPORATORS



Example: E1-115-M/1.20

Nomenclature

- E1 = Series
- 115 = Capacity x 10 in Watts on R404A @ 6KTD = 1150W
- M = Medium Temp
- 1 = Number of Fans
- 20 = Fan diameter x 10 in mm (200mm)

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 =

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



E1 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'
E1 - MEDIUM TEMPERATURE SERIES (4.2mm FIN SPACING - 6FPI)																		
E1-038-M/1.20	380	350	330	188	7	1 x 200	0.21	27			11	9.52	15.88	6.35		644	452	249
E1-056-M/1.20	560	510	530	175	6	1 x 200	0.21	27			11.5	12.7	15.88	6.35		644	452	249
E1-068-M/1.20	680	620	580	165	6	1 x 200	0.21	27			12.5	12.7	15.88	6.35		644	452	249
E1-087-M/1.20	870	800	780	148	5	1 x 200	0.21	27			14.5	12.7	15.88	6.35		644	452	249
E1-115-M/1.20	1150	1080	1100	175	6	1 x 200	0.21	27			15.5	12.7	15.88	6.35		794	452	249
E1-142-M/2.20	1420	1340	1350	312	8	2 x 200	0.42	54			18	12.7	15.88	6.35		994	452	249
E1-167-M/2.20	1670	1560	1640	276	7	2 x 200	0.42	54			22	12.7	15.88	6.35		994	452	249
E1-214-M/3.20	2140	2020	2060	468	10	3 x 200	0.63	81			26	12.7	15.88	6.35		1394	455	249
E1-268-M/3.20	2680	2530	2520	468	10	3 x 200	0.63	81			26	12.7	15.88	6.35		1394	455	249
E1-285-M/4.20	2850	2700	2740	624	12	4 x 200	0.84	108			34	12.7	15.88	6.35		1794	455	249
E1-335-M/4.20	3350	3130	3000	551	11	4 x 200	0.84	108			38	12.7	15.88	6.35		1794	455	249
E1-552-M/5.20	5520	5260	5000	788	13	5 x 200	1.05	135			45	12.7	22.22	6.35		2215	455	295
E1-655-M/6.20	6550	6220	6070	945	14	6 x 200	1.26	162			52	15.88	22.22	6.35		2615	455	295
E1-768-M/7.20	7680	7320	6960	1103	15	7 x 200	1.47	189			62	15.88	28.57	6.35		3014	455	295

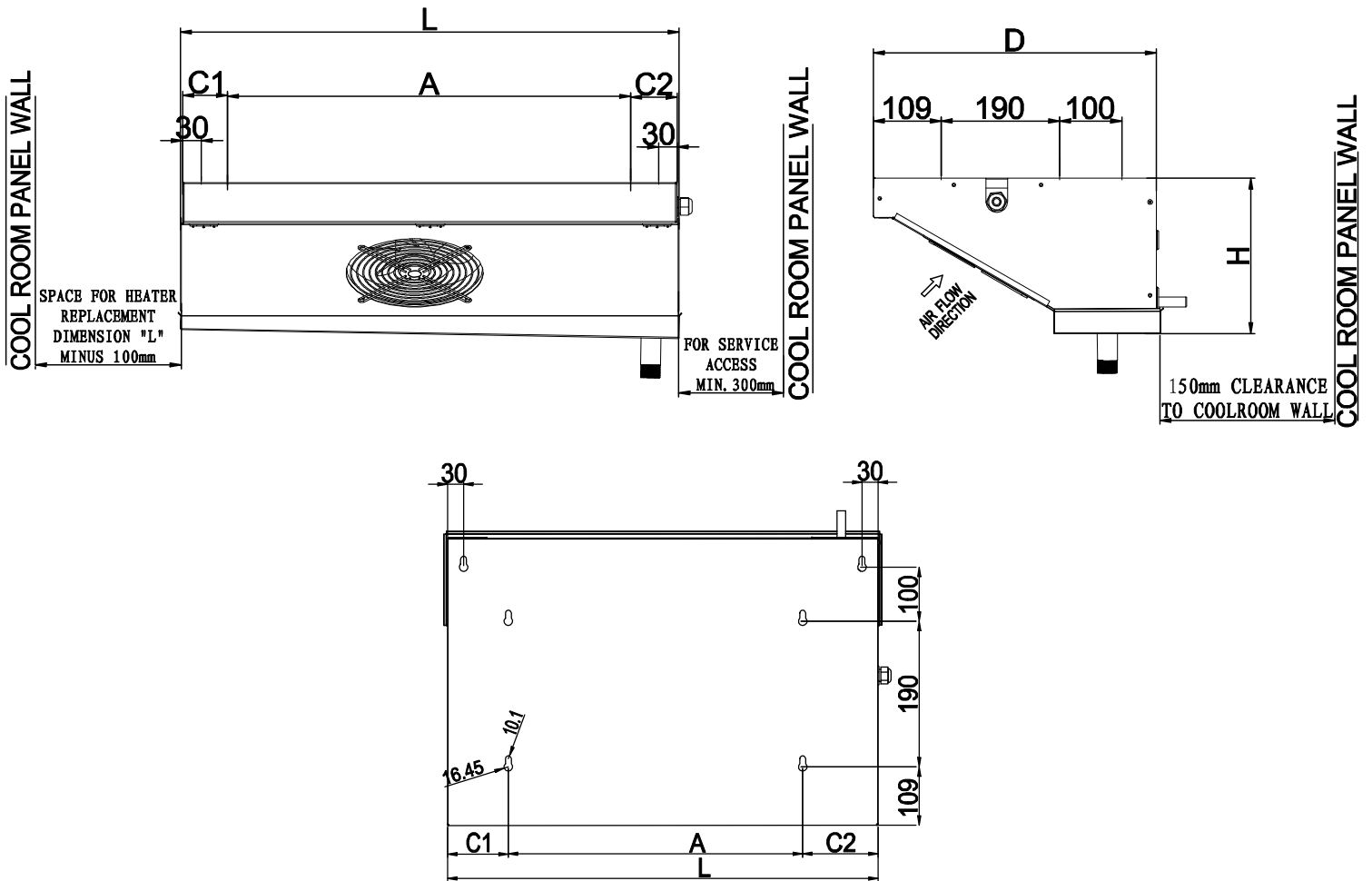
240/1/50

NO ELEMENTS AS STANDARD

NPTT

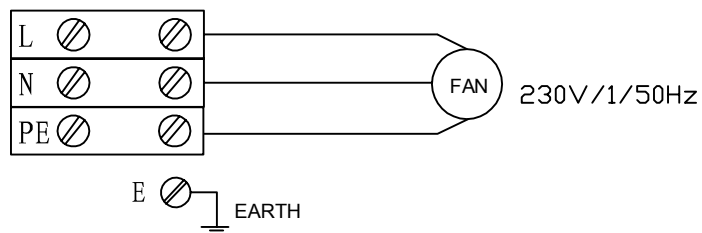
- Capacities based on -4° C SST/ 6KTD for medium temperature models
- NOTE: Medium Temperature models are not fitted with defrost heater elements

Dimensions Diagram



Wiring Diagram

Suitable for E1 with no heater product



- Dimension diagrams are for guidance only.
- Detailed drawings for each model with full specifications available on request.

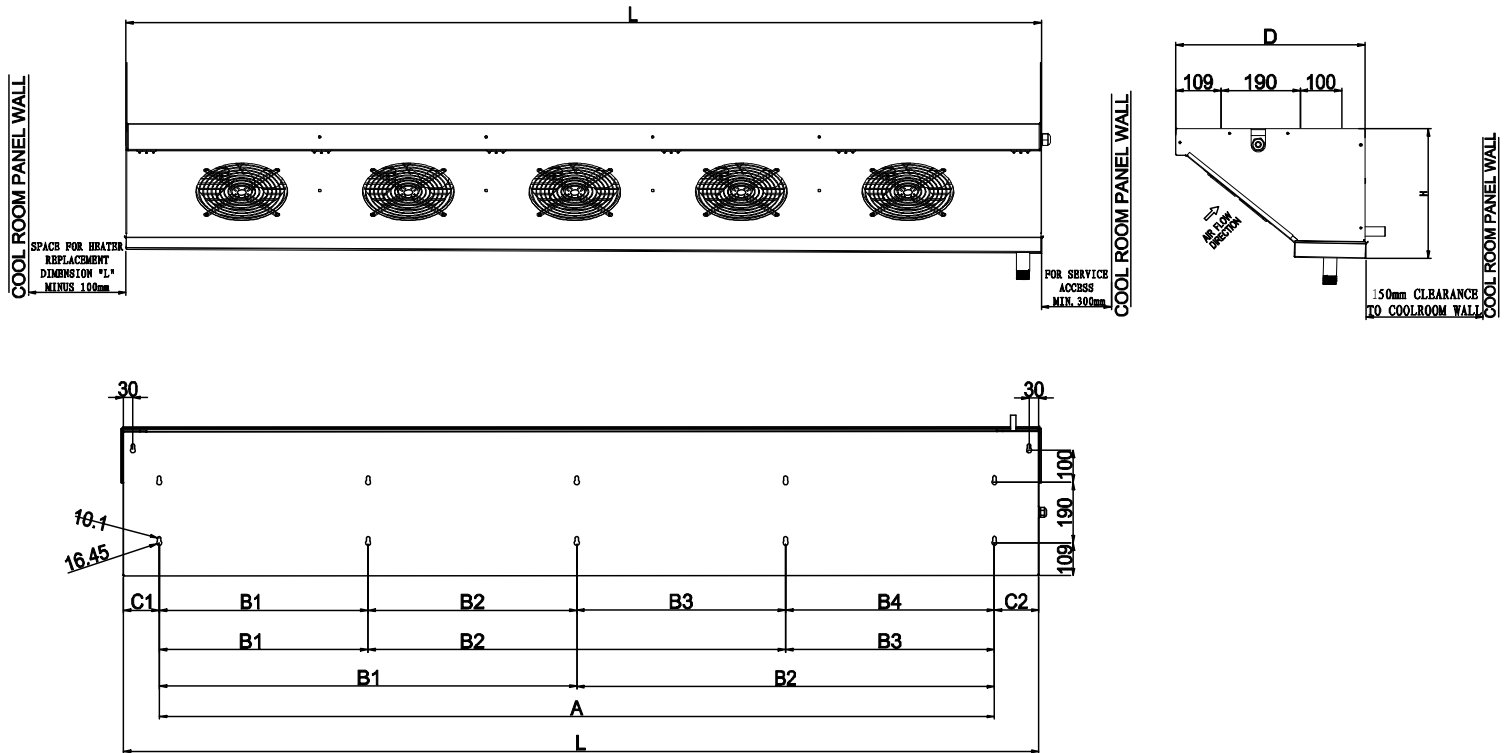


E1 LOW TEMPERATURE SERIES

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'
E1 - LOW TEMPERATURE SERIES (5.1mm FIN SPACING - 5FPI)																		
E1-031-L/1.20	310	280	280	175	7	1 x 200	0.21	27		240	11	9.52	12.70	6.35		644	455	249
E1-050-L/1.20	500	480	430	166	6	1 x 200	0.21	27		240	11.5	9.52	12.70	6.35		644	455	249
E1-054-L/1.20	540	490	450	158	6	1 x 200	0.21	27		240	12.5	9.52	12.70	6.35		644	455	249
E1-070-L/1.20	700	670	690	145	5	1 x 200	0.21	27		480	14.5	12.7	15.88	6.35		644	455	249
E1-093-L/1.20	930	890	800	163	6	1 x 200	0.21	27		400	15.5	12.7	15.88	6.35		794	455	249
E1-115-L/2.20	1150	1110	960	301	8	2 x 200	0.42	54		600	18	12.7	15.88	6.35		994	455	249
E1-142-L/2.20	1420	1360	1080	273	7	2 x 200	0.42	54		600	22	12.7	15.88	6.35		994	455	249
E1-176-L/3.20	1760	1720	1450	453	10	3 x 200	0.63	72		1400	26	12.7	15.88	6.35		1394	455	249
E1-217-L/3.20	2170	2100	1820	408	9	3 x 200	0.63	72		1400	30	12.7	22.22	6.35		1394	455	249
E1-232-L/4.20	2320	2250	1980	603	12	4 x 200	0.84	108		1600	34	12.7	22.22	6.35		1794	455	249
E1-286-L/4.20	2860	2750	2560	546	11	4 x 200	0.84	108		1600	38	12.7	22.22	6.35		1794	455	249
E1-421-L/5.20	4210	4040	3810	761	13	5 x 200	1.05	135		1600	45	12.7	22.22	6.35		2215	455	295
E1-515-L/6.20	5150	4980	4260	913	14	6 x 200	1.26	162		2000	52	15.88	28.57	6.35		2615	455	295
E1-566-L/7.20	5660	5400	5410	1065	15	7 x 200	1.47	189		2400	62	15.88	28.57	6.35		3014	455	295

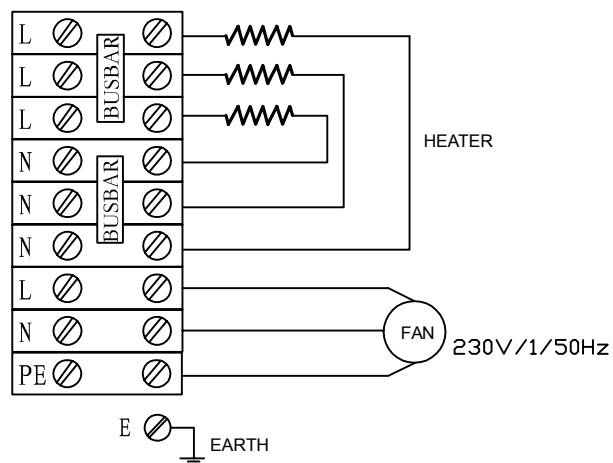
- Capacities based on -24°C SST/ 6KTD for low temperature models
- NOTE: Low Temperature evaporators are supplied with defrost elements fitted

Dimensions Diagram

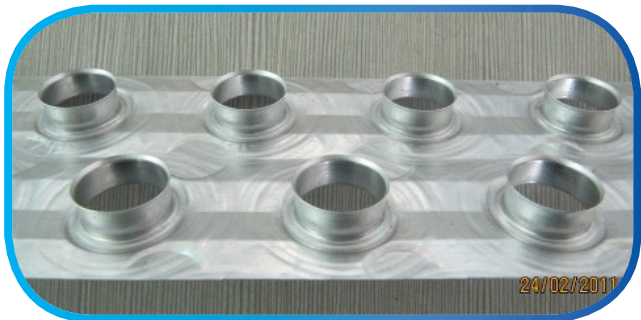
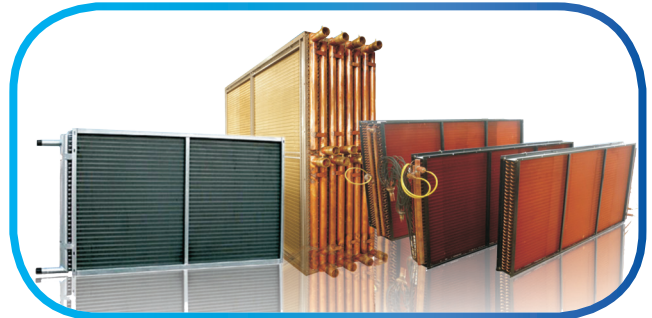


Wiring Diagram

Suitable for E1 with heater product



- Dimension diagrams are for guidance only.
- Detailed drawings for each model with full specifications available on request.



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