

NEW MODEL



E3-SERIES

EVAPORATOR AIR COOLER



The fresh keeper for
The **BEST**

E3-SERIES EVAPORATOR

Greenhalgh evaporator is a high efficiency heat exchanger. Capacity design according to the most popular compressor sizes in this range. Fin and tube design for maximizing the sensible capacity. Fin spacing can be made 4.2mm to 6mm. Greenhalgh chooses only low specific energy consumption fans. Robust stainless steel electric heater with high isolation cable connections to meet standards and ensure the safety of the equipment.

Application Benefits/Features

High Efficiency Heat Exchanger

- Capacity design according to the most popular compressor sizes in this range.
- Fin and tube design for maximizing the sensible capacity.
- The Greenhalgh thermodynamic and aerodynamic designing software is long year tested and proved in Germany.

Fan

- Greenhalgh chooses only low specific energy consumption fans.
- Fan nozzle design for maximum air flow and air throw
- Our fans from the world's leading manufacturer are practically proved to be reliable in operation and long lasting.
- Motor : protection class IP 54 and Insulation class F.

Greenhalgh Defrost

- 4.2mm fin spacing for medium temperature and 6mm for low temperature ensure a good cooling capacity during 4 hour's cycle under typical humid conditions.
- Capacity of the defrost heater is according to the thermodynamic calculation of the latent heat and 4 hour's defrost cycle.
- Robust stainless steel electric heater with high isolation cable connections to meet standards and ensure the safety of the equipment.
- 100% leakage has been tested with method immersed in water tank to make sure the product doesn't leak.
- Heater wired to electric terminal box suitable for wet condition (standard IP66) and low temperature (tested at -40°C).

Catalogue Rating Condition

Medium Temperature (SC2)

- Air inlet temperature 0°C
- Evaporator temperature -8°C
- Superheat 5.2K
- Refrigerant liquid temperature 30°C
- Relative humidity 85%

Low Temperature (SC3)

- Air inlet temperature -18°C
- Evaporator temperature -25°C
- Superheat 4.55K
- Refrigerant liquid temperature 20°C
- Relative humidity 95%

RH Conversion Factors

Low Temperature											
RH	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
Conversion Factors	0.955	0.96	0.957	0.959	0.962	0.969	0.978	0.986	0.993	1	1.012

Medium Temperature											
RH	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	100%
Conversion Factors	0.857	0.86	0.859	0.883	0.915	0.945	0.974	1	1.025	1.049	1.084

Performance Conversion Factors

Air Inlet Temperature										
$\Delta t(K)$		-35	-30	-25	-20	-18	-15	-12	-5	0
	10	0.764	0.958	1.152	1.334	1.403	0.501	1.584	1.782	1.886
	9	0.750	0.924	1.091	1.241	1.295	1.372	1.435	1.558	1.677
	8	0.723	0.872	1.007	1.22	1.163	1.219	1.262	1.370	1.426
	7	0.676	0.795	0.898	0.974	1.000	1.037	1.060	1.122	1.164
	6	0.601	0.684	0.746	0.788	0.800	0.815	0.817	0.845	0.886
	5	0.472	0.490	0.498	0.520	0.522	0.526	0.542	0.595	0.641

Air Inlet Temperature										
$\Delta t(K)$		-25	-20	-15	-10	-5	0	2	5	10
	10	0.599	0.729	0.861	0.989	1.113	1.233	1.285	1.342	1.402
	9	0.585	0.702	0.816	0.923	1.024	1.120	1.162	1.202	1.239
	8	0.562	0.663	0.758	0.844	0.916	1.000	1.019	1.040	1.079
	7	0.525	0.610	0.684	0.746	0.807	0.860	0.868	0.873	0.890
	6	0.475	0.536	0.586	0.617	0.640	0.662	0.670	0.676	0.685
	5	0.383	0.412	0.429	0.445	0.455	0.459	0.462	0.463	0.464

Type	E3-061- L-1x500	E3-084- L-1x500	E3-101- L-1x500	E3-126- L-2x500	E3-164- L-2x500	E3-199- L-2x500	E3-215- L-3x500	E3-246- L-3x500	E3-298- L-3x500	E3-313- L-4x500	E3-360- L-4x500	E3-436- L-4x500
Cooling capacity												
R404 (kW)	6.11	8.42	10.11	12.55	16.34	19.88	21.47	24.57	29.83	30.83	36.02	43.63
Air flow (m³)	7521	7180	6877	15043	14360	13755	22565	21540	20633	29404	28725	34685
Air throw (m)	18	18	18	19	19	19	19	19	19	20	20	20
Fan 3Ph/380V/50Hz												
Quantity	1	1	1	2	2	2	3	3	3	4	4	5
Diameter (mm)	500	500	500	500	500	500	500	500	500	500	500	500
Amphere (A)	1.45	1.45	1.45	2.90	2.90	2.90	4.35	4.35	4.35	5.80	5.80	7.25
Kilowatt (kW)	0.83	0.83	0.83	1.66	1.66	1.66	2.49	2.49	2.49	3.32	3.32	4.15
Sound level dB(A) 1m	77	77	77	78	78	78	79	79	79	80	80	81
Heater 3Ph/380V/50Hz												
Kilowatt (kW)	3.96	5.94	7.92	7.92	11.88	15.84	11.88	17.82	23.76	23.76	23.76	29.70
Dimension												
Length (mm)	1464	1464	1464	2564	2564	2564	3664	3664	3664	4764	4764	5864
Height (mm)	827	827	827	827	827	827	827	827	827	827	827	827
Depth (mm)	621	621	621	621	621	621	621	621	621	691	691	691
D1 (mm)	480	480	480	480	480	480	480	480	480	550	550	550
L1 (mm)	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
L2 (mm)	-	-	-	1100	1100	1100	1100	1100	1100	1100	1100	1100
L3 (mm)	-	-	-	2240	2240	2240	3340	3340	3340	4440	4440	5540
Weight (kg)	109	118	127	180	197	215	251	277	301	381	401	510
Connection												
Inlet (mm)	5/8	5/8	5/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Outlet (mm)	1 1/8	1 1/8	1 3/8	1 3/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8
Drain pipe (NW")	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 2	NPT 2	NPT 2	NPT 2	NPT 2	NPT 2

Type	E3-104- ME- 1x500	E3-141- ME- 1x500	E3-165- ME- 1x500	E3-213- ME-2 x500	E3-276- ME- 2x500	E3-326- ME- 2x500	E3-366- ME- 3x500	E3-414- ME- 3x500	E3-492- ME- 3x500	E3-531- ME- 4x500	E3-604- ME- 4x500	E3-714- ME- 4x500
Cooling capacity												
R404 (kW)	10.43	14.05	16.50	21.32	27.62	32.75	36.64	41.44	49.17	53.07	60.35	71.39
Air flow (m³)	8452	7968	7608	16902	15936	15216	24585	23905	22824	30181	29875	29286
Air throw (m)	19	19	19	20	20	20	20	20	20	21	21	21
Fan 3Ph/380V/50Hz												
Quantity	1	1	1	2	2	2	3	3	3	4	4	4
Diameter (mm)	500	500	500	500	500	500	500	500	500	500	500	500
Amphere (A)	1.45	1.45	1.45	2.90	2.90	2.90	4.35	4.35	4.35	5.80	5.80	5.80
Kilowatt (kW)	0.83	0.83	0.83	1.66	1.66	1.66	2.49	2.49	2.49	3.32	3.32	3.32
Sound level dB(A) 1m	77	77	77	78	78	78	79	79	79	80	80	80
Heater 3Ph/380V/50Hz												
Kilowatt (kW)	1.98	3.96	5.94	3.96	7.92	11.88	11.88	11.88	17.82	15.84	15.84	23.76
Dimension												
Length (mm)	1464	1464	1464	2564	2564	2564	3664	3664	3664	4764	4764	4764
Height (mm)	827	827	827	827	827	827	827	827	827	827	827	827
Depth (mm)	621	621	621	621	621	621	621	621	621	691	691	691
D1 (mm)	480	480	480	480	480	480	480	480	480	550	550	550
L1 (mm)	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
L2 (mm)	-	-	-	1100	1100	1100	1100	1100	1100	1100	1100	1100
L3 (mm)	-	-	-	2240	2240	2240	3340	3340	3340	4440	4440	4440
Weight (kg)	110	120	129	182	200	217	269	282	307	386	411	461
Connection												
Inlet (mm)	5/8	5/8	5/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Outlet (mm)	1 1/8	1 3/8	1 3/8	1 3/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8
Drain pipe (NW")	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 2	NPT 2	NPT 2	NPT 2	NPT 2	NPT 2

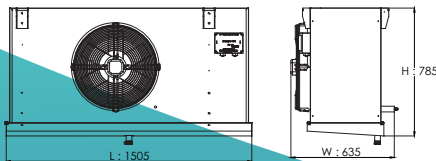
Note: standard medium temperature evaporator is without heater. If you need heater, please add E in nomenclature. Ex: E3-104-ME.

E3-Series

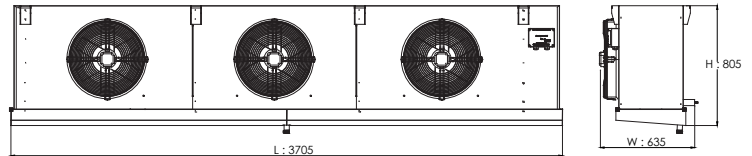
Medium Temperature Evaporators With Fin Spacing 4.2mm

Type	E3-104- M-1x500	E3-141- M-1x500	E3-165- M-1x500	E3-213- M-2x500	E3-276- M-2x500	E3-326- M-2x500	E3-366- M-3x500	E3-414- M-3x500	E3-492- M-3x500	E3-531- M-4x500	E3-604- M-4x500	E3-714- M-4x500
Cooling capacity												
R404 (kW)	10.43	14.05	16.50	21.32	27.62	32.75	36.64	41.44	49.17	53.07	60.35	71.39
Air flow (m ³)	8452	7968	7608	16902	15936	15216	24585	23905	22824	30181	29875	29286
Air throw (m)	19	19	19	20	20	20	20	20	20	21	21	21
Fan 3Ph/380V/50Hz												
Quantity	1	1	1	2	2	2	3	3	3	4	4	4
Diameter (mm)	500	500	500	500	500	500	500	500	500	500	500	500
Amphere (A)	1.45	1.45	1.45	2.90	2.90	2.90	4.35	4.35	4.35	5.80	5.80	5.80
Kilowatt (kW)	0.83	0.83	0.83	1.66	1.66	1.66	2.49	2.49	2.49	3.32	3.32	3.32
Sound level dB(A) 1m	77	77	77	78	78	78	79	79	79	80	80	80
Dimension												
Length (mm)	1464	1464	1464	2564	2564	2564	3664	3664	3664	4764	4764	4764
Height (mm)	827	827	827	827	827	827	827	827	827	827	827	827
Depth (mm)	621	621	621	621	621	621	621	621	621	691	691	691
D1 (mm)	480	480	480	480	480	480	480	480	480	550	550	550
L1 (mm)	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140	1140
L2 (mm)	-	-	-	1100	1100	1100	1100	1100	1100	1100	1100	1100
L3 (mm)	-	-	-	2240	2240	2240	3340	3340	3340	4440	4440	4440
Weight (kg)	110	120	129	182	200	217	269	282	307	386	411	461
Connection												
Inlet (mm)	5/8	5/8	5/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Outlet (mm)	1 1/8	1 3/8	1 3/8	1 3/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 3/8	2 3/8	2 3/8
Drain pipe (NW")	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 1.5	NPT 2	NPT 2	NPT 2	NPT 2	NPT 2	NPT 2

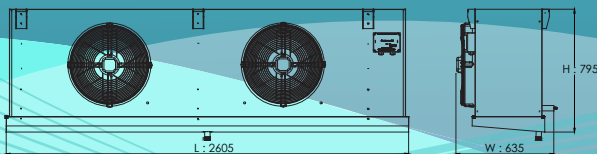
1 x 500 Fans



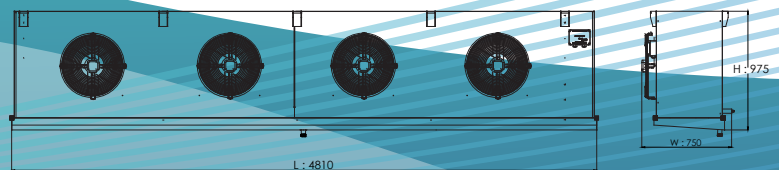
3 x 500 Fans



2 x 500 Fans



4 x 500 Fans



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