

G4 JUMBO AIR COOLED CONDENSERS

EDEN[®]
The Cool Solution



- Capacity Range - 252.9kW to 867.0kW(15KTD)
- High Efficient Coil design with Latest Heat Transfer Technology
- New Aesthetic design with Round Corners
- The High Quality German Motors
- Very Quiet Operation

G4 Jumbo Profile Series Condensers

EFGP

General Features

Coil Design

- Advanced Smart Circuitry Coil Technology combined with Double Sine Wave Fin to maximize the heat transfer coefficient
- Low Oil retention to further improve the heat transfer performance

Fins

- Produced from high grade Aluminum Fins (AA 1100 standard)
- Double Sine Wave Pattern with Rippled Fin Edges to provide higher heat transfer efficiency
- Standard 12FPI coil design with 10FPI option available at no additional cost

Casing

- Casing and Legs are from Galvanized Sheet Steel
- Temperature and UV Radiation resistant Powder Coating on all models
- New Aesthetic design with Round corners for all Eden G4 Jumbo Condensers in line with Eden G4 products range
- Inbuilt Header Protection on all models
- Segmented Fan Bay Compartments for better Capacity Control

Axial Fans and Venturis

- G4 Jumbo Condenser uses high quality German motors
- Standard 2 speed motors are used on all models
- All motors are fitted with Thermistor motor protection conforming to DIN 40050 safety standard
- New Eden's special designed Venturi for all fan models enhances better fan performance
- Ensure long life and durability
- Suitable for outdoor installation and ambient temperature of -30°C to $+60^{\circ}\text{C}$
- EC fans option available, to maintain ideal discharge pressure and reducing condenser fan power input during low load condition



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Sound Pressure Level

- G4 Jumbo Condenser offers lower sound pressure levels to meet the most stringent environment requirements of most countries and conforming to DIN 43635 and ISO 3744/3745
- Sound pressure levels are shown in the catalogue at nominated distances under the Inverse Square Sound Laws

“Green” Label

- Improved Power Input consumed kW to output kW rejection ratio helps reduce Energy Wastage
- Additional Energy Cost Reduction through EC fans are readily available on all Eden G4 Jumbo Condensers on request

Quality Assurance

- All Eden G4 Jumbo Condensers are designed, manufactured and tested in our factories that are ISO 9001 certified

One Year Warranty

- For all Eden G4 Jumbo condensers (terms and conditions apply)

Optional

- Passivated Corrosion Protection Fins
- Copper Fin Coil
- Stainless Steel Casing
- Special Motors (60Hz) available
- EC Motors
- Dry Coolers on Request

Nomenclature

EFGP5270.86.10.EC



G4 Jumbo Profile Series Condensers

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EFGP-CONDENSER SPECIFICATIONS

12FPI / 10FPI

Model	Capacity R22				Fan Data								
	12 FPI		10 FPI		No. of Fan 800mm	Fan Motor			Air Flow (m ³ /h)	Noise Level		Connections	
	kW	Btu/hr	kW	Btu/hr		(rpm)	(Watts)	(Amps)		db(A)		(mm)	
	15 KTD	27FTD	15 KTD	27FTD						3m	10m	Inlet	Outlet
EFGP 3580.84	358.0	1,221,496	314.3	1,072,473	4	900	9,320	19.40	122,508	59.5	49.0	66.7	54.0
	288.0	982,656	252.9	862,772	4	700	6,360	11.48	94,612	53.5	43.0	66.7	54.0
EFGP 4230.84	423.0	1,443,276	371.4	1,267,196	4	900	9,320	19.40	104,623	59.5	49.0	66.7	54.0
	337.0	1,149,844	295.9	1,009,563	4	700	6,360	11.48	77,216	53.5	43.0	66.7	54.0
EFGP 4450.84	445.0	1,518,340	390.7	1,333,103	4	900	9,320	19.40	99,360	59.5	49.0	66.7	54.0
	363.0	1,238,556	318.7	1,087,452	4	700	6,360	11.48	67,640	53.5	43.0	66.7	54.0
EFGP 5270.86	527.0	1,798,124	462.7	1,578,753	6	900	13,980	29.10	183,744	61.5	50.0	66.7	54.0
	424.0	1,446,688	372.3	1,270,192	6	700	9,540	17.22	141,919	54.5	44.0	66.7	54.0
EFGP 5980.86	598.0	2,040,376	525.0	1,791,450	6	900	13,980	29.10	156,935	61.5	50.0	66.7	54.0
	485.0	1,654,820	425.8	1,452,932	6	700	9,540	17.22	115,823	54.5	44.0	66.7	54.0
EFGP 6600.86	660.0	2,251,920	579.5	1,977,186	6	900	13,980	29.10	160,200	61.5	50.0	66.7	54.0
	516.0	1,760,592	453.0	1,545,800	6	700	9,540	17.22	101,462	54.5	44.0	66.7	54.0
EFGP 7200.88	720.0	2,456,640	632.2	2,156,930	8	900	18,640	38.80	245,016	62.5	52.0	66.7	54.0
	572.0	1,951,664	502.2	1,713,561	8	700	12,720	22.96	189,223	56.5	46.0	66.7	54.0
EFGP 8050.88	805.0	2,746,660	706.8	2,411,567	8	900	18,640	38.80	209,246	62.5	52.0	66.7	54.0
	667.0	2,275,804	585.6	1,998,156	8	700	12,720	22.96	154,433	56.5	46.0	66.7	54.0
EFGP 8670.88	867.0	2,958,204	761.2	2,897,303	8	900	18,640	38.80	198,720	62.5	52.0	66.7	54.0
	718.0	2,449,816	630.4	2,150,938	8	700	12,720	22.96	135,281	56.5	46.0	66.7	54.0

Note:

Eden cannot guarantee performance of the condensers (capacities ratings, sound level etc), if non standard motors are used.

All Fan Motor models will be offered in Vertical Air Throw configuration.

All Fan Motors are 400V/3Ph/50Hz.

* Sound pressure levels are measured in conformity to DIN 45635 and ISO 3744/3745.

* Sound pressure levels are shown in catalogue at a distance of 3m and 10m, under Inverse Square Laws. Sound pressure Sound levels for 1m are at source.

Refrigerant	Capacity Multiplier
R22	1.00
R407B	0.95
R407C	0.93
R134A	0.975
R404A	0.989
R507	0.989

Correction Factor Guideline (EFGP)

G4 Jumbo Profile Series Condensers

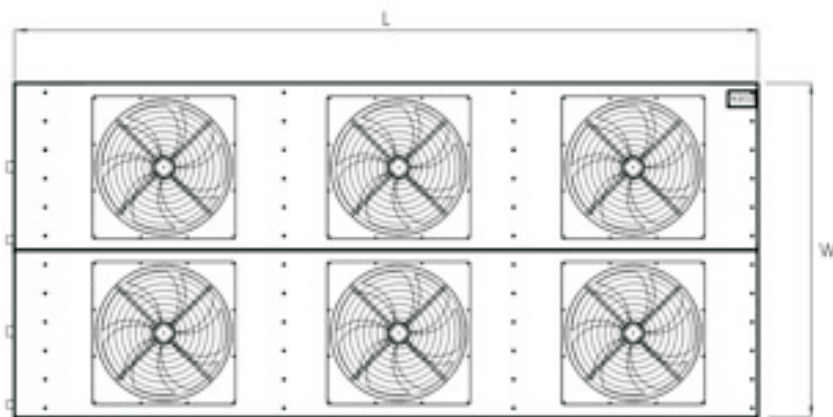
EFGP

EFGP - TECHNICAL SPECIFICATIONS

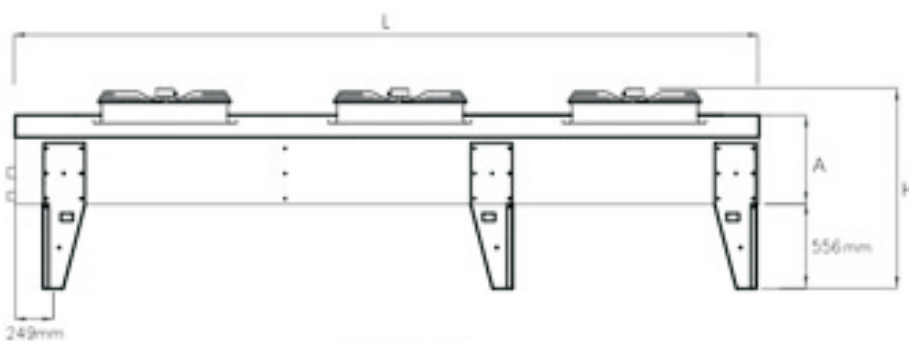
Model	Size (mm)							Weight (kg)*
	A	H	W	L	H*	W*	L*	
EFGP 3580.84	582	1,340	2,191	3,384	1,640	2,490	3,684	835
EFGP 4230.84	582	1,340	2,191	3,384	1,640	2,490	3,684	879
EFGP 4450.84	582	1,340	2,191	3,384	1,640	2,490	3,684	923
EFGP 5270.86	582	1,340	2,191	4,921	1,640	2,490	5,221	1,176
EFGP 5980.86	582	1,340	2,191	4,921	1,640	2,490	5,221	1,242
EFGP 6600.86	582	1,340	2,191	4,921	1,640	2,490	5,221	1,308
EFGP 7200.88	620	1,380	2,191	6,451	1,680	2,490	6,751	1,500
EFGP 8050.88	620	1,380	2,191	6,451	1,680	2,490	6,751	1,588
EFGP 8670.88	620	1,380	2,191	6,451	1,680	2,490	6,751	1,676

* Packed Dimensions / Weight

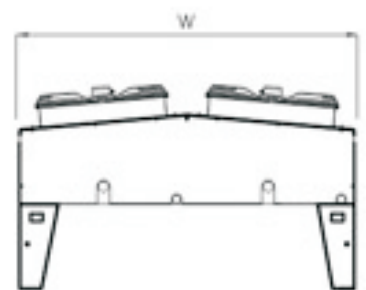
INSTALLATION GUIDE FOR EFGP



PLAN VIEW



FRONT VIEW



SIDE VIEW

EDEN'S ENERGYSAVINGS SOLUTION - EC Technology

New Energy Saving EC Motors & Fans (ESM)

In refrigeration technology, it is necessary to continuously find ways to decrease energy consumption. Eden's goal is to be able to offer products that simply save costs. EC Fans are optional with our Eden G4 Condensers and it is possible to achieve average savings of 30 % using EC technology.

EC technology is an eco-friendly and most cost-efficient alternative to AC technology. The EC motor with its integrated commutation electronics provides maximum efficiency across the entire speed range and optimum noise behaviour with minimum installation complexity.

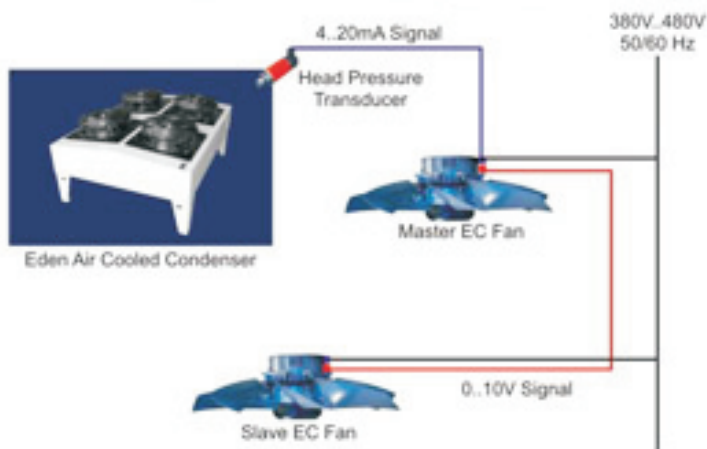
- EC fans can use as little as 1 / 3 the energy of industry standard fans
- EC fans offer easy, quiet, efficient speed control
- EC fans have all the electronics built into the fan
- EC fans make your other components more efficient
- EC fans save you money
- EC fans make your products more competitive

EC Motors Easy Operation

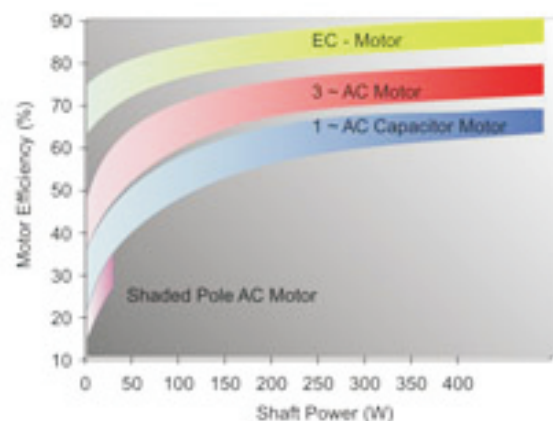
- EC Motor connects directly to AC-power supply
- 200V..277V single phase
- 380V..480V three phase
- Operates on either 50Hz or 60Hz with same performance
- Variable speed control without Frequency Inverter, Transformer or TRIAC
- Always operates in the correct direction
- Operates much cooler implies longer lifetime
- Less heat for a refrigeration system to handle (increased refrigeration COP)
- Integrated Alarm Function:
 - Thermal Overload Protection Implies No External Motor Protection Switch
 - Locked Rotor Protection
 - Phase Failure
 - High Temperature monitoring: winding temperature / power module / electronics
- Simplified cabling & cables with smaller cross section

EC Motors - Master & Slave Speed Control

EC Motors - Master & Slave Speed Control



Efficiency of EC Motors Vs AC Motors



ADDITIONAL INFORMATION

Example:

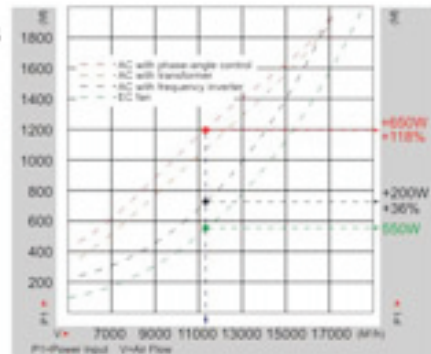
Required Heat Rejection for Condenser: 329kW
 Saturated Condensing Temperature: 45°C
 Ambient Temperature: 35°C
 Therefore, required KTD for Condenser: 10KTD
 Type of Refrigerant: R404A
 FPI: 12 FPI

Selection of the Eden G4 Jumbo Condenser as follow:

1. Determine the Correction Factors (Refers to page 3):
 a. Capacity Correction Factor for R404A=0.989
2. Calculation of required Capacity:
 a. $329\text{kW} / 0.989 = 332.7\text{kW}$ (Inclusive of the Fan Load)
3. Calculate the Condenser Capacity needed at 10KTD
 a. $332.7\text{kW} * 15 / 10 = 499.1\text{kW}$
4. Hence an **EFGP 5270.86** for High Speed or an **EFGP 6600.86** for Low Speed is the suitable Air Cooled Condenser for the above application.

Energy Savings With Eden G4 Jumbo Condensers

At every speed, the EC fan by definition operates very efficiently. Thus energy savings of over 10 % is attained for condensers / evaporators in which EC fans work, even at nominal speed. In the continuously controlled range, the relative and absolute savings are substantially greater. Compared to EC technology, conventional phase-angle control can use as much as twice the energy.



Eden Select:



The Eden Select software enables you to do a refrigeration heat load calculation and select the actual model for the unit cooler and condenser.



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