

EDEN E²PAK

Frequency Inverter Condensing Units Product Catalogue





EDEN E²Pak Frequency Inverter Condensing Unit

The E²Pak has been specifically developed for applications with varying cooling loads in multiple evaporator systems. As cooling loads constantly change, the E²Pak intelligently adapts to meet these loads by regulating the speed of the compressor and/or condenser fan(s), thereby allowing constant temperature regulation within refrigerated spaces; reduces compressor cycling and achieves an overall energy efficiency operation at all times. The E²Pak has been designed for a quick and easy on-site setup and installation without the need of many additional components.

The E²Pak incorporates Bitzer Octagon[®] Compressor with integrated frequency inverter, operating within 30-80Hz and EDEN G4 energy efficient air-cooled Condenser using German AC fans (standard) or EC fans (optional).

Bitzer Octagon[®] Compressors with integrated suction gas cooled frequency inverter

- ▶ High reliability
- ▶ High system efficiency
- ▶ Low operating cost

Eden energy efficient air cooled condenser with EC Fan(Optional)

- ▶ High system efficiency
- ▶ Low operating cost
- ▶ Low sound emission with activation of low sound mode for night operations



"Plug and Play" concept with fully integrated programmable control, wiring, piping and smart toggles

- ▶ Easy on-site installation
- ▶ Easy configuration & setup

Sleek and slim design and removal housing with vertical air flow

- ▶ Suitable to indoor & outdoor installations

Features

Special Highlights of E²Pak

- ▶ Optimum capacity adaptation by an integrated frequency inverter – capacity control range above 3:1
- ▶ High system efficiency during optimized operation of compressor and condenser fans
- ▶ High reliability due to active monitoring of compressor parameters and application limits
- ▶ Vertical air flow for space saving wall mounting
- ▶ Adequately size condenser suitable for high ambient temperature installations
- ▶ Smart toggle switches available for low sound mode and chiller/freezer application
- ▶ Easy commissioning due to pre-programmed controller

Reliable Octagon[®] Technology

- ▶ Universal application range (R404A/507A/R407C/R134A/R22)
- ▶ Solid and compact design for a large variable speed range (30Hz to 80Hz) with integrated suction gas cooled frequency inverter
- ▶ Soft compressor start without starting current peaks
- ▶ Low vibration construction for quiet operation at all frequencies

Energy Efficient Eden Air Cooled Condensers

- ▶ Eden's latest condenser coil technology incorporating Inner Grooved Tubes for high efficiency.
- ▶ Compact design with a wide range condensing capacity suitable for higher ambient temperatures
- ▶ Variable speed EC Fans for optimal performance and low sound operation during night mode activation, available as option.

Complete Equipment

- ▶ Attractive weather protective housing
- ▶ Integrated pre-programmed control and monitoring of all unit parameters
- ▶ Accessible external control panel
- ▶ Integrated main switch and compressor contactor
- ▶ Complete wiring and piping for easy on-site installation

Intelligent System Control

- ▶ Step-less capacity adaptation during variable cooling load conditions
- ▶ Step-less control of condenser fans
- ▶ Automatic low sound or economy mode during lower ambient temperature conditions
- ▶ Temperature set back during night mode operations
- ▶ Active monitoring of application limits and operating parameters
- ▶ Selectable condenser fan start temperature selectable for winter operations
- ▶ Externally located connections for suction and liquid line
- ▶ Liquid line integrated with sight glass and filter drier
- ▶ Liquid receiver with shut off valve

Adaptable Range of Cooling Capacities

The step-less modulation of the compressor and condenser fan allows for a flexible adaptation of the compressor capacity to the actual cooling requirements. Cooling load fluctuations are not only easily control, it is possible to maintain constant cooling capacity over a wider ambient temperature range.

NOMENCLATURE

EPF2D030.0274.61

1	- No. of Fans
6	- Fan Size (mm) (2 - 300mm, 3 - 350mm, 4 - 400mm, 5 - 500mm, 6 - 630mm)
0274	- Total Heat Rejection of Condenser (kW) (0274 - 27.4kW at 15KTD, R22)
030	- Nominal Capacity (HP), 030 - 3HP
2D	- Compressor Series
F	- Bitzer F1 compressor
EP	- E ² Pak Frequency Inverter Condensing Units

E²Pak Condensing Units PERFORMANCE DATA

R404A / R507A

30Hz / 50Hz / 80Hz

Model	Ambient Temperature (°C)	Refrigerating Capacity Q ₀ (W) Power Input P _e (kW)															
		Evaporating Temperature (°C)															
		+5			-5			-15			-25			-35			
		30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	
EPF2D030.0274.61	27	Q ₀	8,160	13,690	20,000	5,730	9,700	14,650	3,880	6,600	10,100	2,490	4,240	6,530	1,500	2,500	3,860
		P _e	1.84	3.40	6.13	1.73	3.12	5.35	1.55	2.72	4.55	1.31	2.23	3.66	1.03	1.69	2.69
	32	Q ₀	7,530	12,640	18,480	5,280	8,940	13,490	3,560	6,050	9,250	2,270	3,850	5,930	1,340	2,230	3,440
		P _e	2.03	3.71	6.58	1.87	3.34	5.68	1.64	2.86	4.75	1.36	2.30	3.73	1.04	1.68	2.66
	43	Q ₀	6,310	10,550	15,130	4,370	7,470	11,060	2,890	4,960	7,640	1,790	3,060	4,750	1,010	1,660	2,580
		P _e	2.37	4.28	7.45	2.12	3.71	6.27	1.81	3.08	5.04	1.44	2.37	3.80	1.05	1.62	2.51
EPF4F050.0345.61	27	Q ₀	10,880	17,800	25,100	7,680	12,870	18,750	5,220	8,830	13,320	3,360	5,710	8,730	1,990	3,380	5,200
		P _e	2.52	4.76	8.71	2.36	4.28	7.49	2.10	3.70	6.23	1.77	3.01	4.94	1.38	2.25	3.59
	32	Q ₀	10,030	16,460	23,200	7,070	11,850	17,270	4,780	8,090	12,210	3,050	5,180	7,930	1,780	3,020	4,640
		P _e	2.75	5.12	9.21	2.54	4.55	7.86	2.22	3.88	6.47	1.84	3.10	5.04	1.40	2.25	3.56
	43	Q ₀	8,430	13,520	-	5,880	9,820	14,050	3,910	6,670	9,910	2,420	4,150	6,410	1,350	2,290	3,550
		P _e	3.17	5.84	-	2.85	5.03	8.56	2.44	4.15	6.85	1.95	3.21	5.13	1.42	2.20	3.41
EPF4E060.0345.61	27	Q ₀	-	-	-	9,650	15,870	22,400	6,560	11,010	16,150	4,210	7,120	1,080	2,470	4,190	6,420
		P _e	-	-	-	3.00	5.51	9.74	2.65	4.68	7.93	2.20	3.76	6.16	1.69	2.76	4.39
	32	Q ₀	-	-	-	8,860	14,610	20,600	5,990	10,060	14,790	3,810	6,450	9,780	2,200	3,720	5,700
		P _e	-	-	-	3.22	5.82	10.15	2.79	4.87	8.17	2.28	3.84	6.24	1.71	2.73	4.32
	43	Q ₀	-	-	-	7,370	11,910	-	4,900	8,270	11,890	3,020	5,160	7,840	1,640	2,810	4,350
		P _e	-	-	-	3.59	6.39	-	3.03	5.18	8.56	2.40	3.93	6.29	1.71	2.66	4.10

3

R134A

30Hz / 50Hz / 80Hz

Model	Ambient Temperature (°C)	Refrigerating Capacity Q ₀ (W) Power Input P _e (kW)															
		Evaporating Temperature (°C)															
		+5			0			-5			-10			-20			
		30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	
EPF2D030.0274.61	27	Q ₀	4,960	8,470	13,000	4,070	6,950	10,710	3,300	5,650	8,720	2,650	4,520	7,000	1,640	2,750	4,260
		P _e	1.06	1.92	3.28	1.01	1.80	3.06	0.94	1.68	2.82	0.88	1.54	2.57	0.71	1.23	2.02
	32	Q ₀	4,660	7,950	12,210	3,820	6,520	10,040	3,090	5,280	8,150	2,470	4,220	6,520	1,510	2,540	3,930
		P _e	1.15	2.06	3.50	1.08	1.93	3.25	1.01	1.79	2.99	0.93	1.63	2.71	0.75	1.28	2.09
	43	Q ₀	4,060	6,980	10,700	3,310	5,690	8,810	2,660	4,570	7,110	2,100	3,620	5,630	1,260	2,120	3,290
		P _e	1.31	2.32	3.90	1.24	2.16	3.59	1.15	1.98	3.27	1.06	1.79	2.93	0.83	1.36	2.18
EPF4F050.0345.61	27	Q ₀	6,710	11,400	17,230	5,490	9,350	14,280	4,440	7,570	11,630	3,540	6,040	9,300	2,130	3,620	5,600
		P _e	1.40	2.55	4.43	1.33	2.39	4.08	1.24	2.21	3.73	1.15	2.01	3.37	0.92	1.58	2.58
	32	Q ₀	6,300	10,700	16,220	5,150	8,760	13,400	4,150	7,080	10,870	3,300	5,630	8,670	1,970	3,330	5,150
		P _e	1.52	2.74	4.71	1.43	2.55	4.32	1.33	2.35	3.94	1.22	2.13	3.53	0.97	1.63	2.65
	43	Q ₀	5,520	9,440	14,080	4,880	7,690	11,650	3,590	6,160	9,500	2,820	4,850	7,530	1,630	2,780	4,330
		P _e	1.74	3.07	5.28	1.63	2.84	4.79	1.50	2.59	4.29	1.37	2.32	3.80	1.05	1.72	2.74
EPF4E060.0345.61	27	Q ₀	8,650	14,570	21,500	7,090	12,010	17,970	5,750	9,780	14,840	4,610	7,840	12,000	2,800	4,780	7,370
		P _e	1.84	3.39	6.07	1.79	3.23	5.62	1.71	3.04	5.17	1.61	2.82	4.72	1.34	2.27	3.71
	32	Q ₀	8,110	13,670	20,100	6,640	11,250	16,850	5,380	9,130	13,870	4,290	7,300	11,170	2,580	4,400	6,780
		P _e	2.01	3.66	6.46	1.93	3.45	5.94	1.82	3.21	5.41	1.69	2.94	4.89	1.38	2.31	3.74
	43	Q ₀	7,080	11,850	17,310	5,760	9,790	14,430	4,620	7,910	11,840	3,650	6,260	9,550	2,120	3,630	5,640
		P _e	2.32	4.17	7.25	2.19	3.84	6.55	2.03	3.50	5.86	1.85	3.14	5.15	1.43	2.33	3.70

E²Pak Condensing Units

PERFORMANCE DATA

R22

30Hz / 50Hz / 80Hz

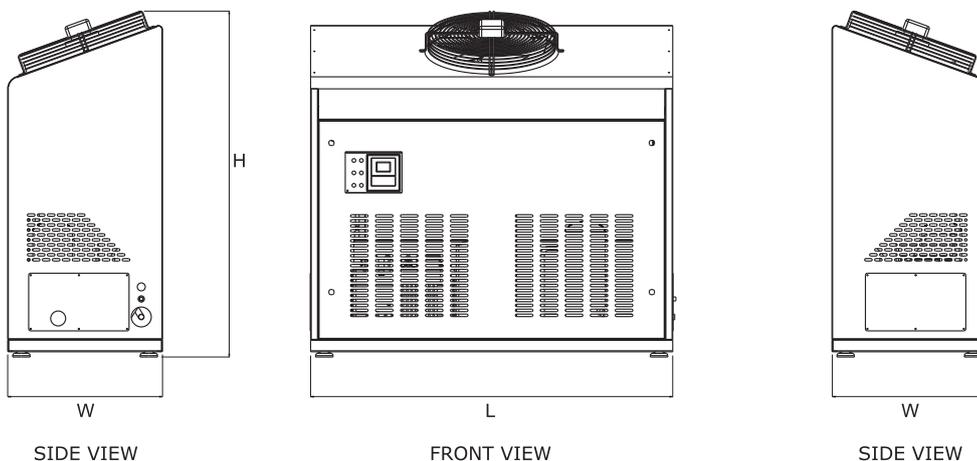
Model	Ambient Temperature (°C)	Refrigerating Capacity Q ₀ (W) Power Input P _e (kW)															
		Evaporating Temperature (°C)															
		+5			0			-10			-20			-25			
		30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	30Hz	50Hz	80Hz	
EPF2D030.0274.61	27	Q ₀	7,480	12,680	19,000	6,230	10,590	16,070	4,200	7,160	10,990	2,670	4,560	7,020	2,070	3,520	5,430
		P _e	1.54	2.84	5.11	1.53	2.78	4.83	1.40	2.49	4.18	1.20	2.07	3.42	1.10	1.87	3.05
	32	Q ₀	7,040	11,940	17,880	5,850	9,940	15,080	3,910	6,660	10,210	2,450	4,170	6,420	1,880	3,190	4,900
		P _e	1.72	3.14	5.54	1.67	3.01	5.16	1.49	2.61	4.36	1.25	2.14	3.51	1.14	1.92	3.12
	43	Q ₀	6,160	10,440	15,370	5,070	8,660	12,890	3,290	5,640	8,670	1,950	3,350	5,190	1,450	2,440	3,790
		P _e	2.03	3.65	6.37	1.92	3.39	5.79	1.64	2.83	4.67	1.36	2.28	3.68	1.25	2.05	3.28
EPF4F050.0345.61	27	Q ₀	10,440	17,430	25,300	8,690	14,640	21,500	5,820	9,890	14,960	3,670	6,240	9,570	2,810	4,790	7,350
		P _e	2.13	4.06	7.56	2.09	3.86	6.97	1.91	3.39	5.77	1.62	2.81	4.64	1.47	2.50	4.09
	32	Q ₀	9,850	16,450	23,800	8,180	13,770	20,200	5,440	9,220	13,960	3,370	5,740	8,780	2,550	4,340	6,660
		P _e	2.38	4.44	8.12	2.30	4.18	7.42	2.04	3.59	6.05	1.70	2.92	4.79	1.53	2.58	4.19
	43	Q ₀	8,700	14,260	20,600	7,160	11,930	17,330	4,640	7,930	11,760	2,750	4,710	7,250	2,000	3,420	5,290
		P _e	2.81	5.21	9.23	2.65	4.78	8.31	2.28	3.93	6.59	1.87	3.12	5.05	1.68	2.75	4.39
EPF4E060.0345.61	27	Q ₀	12,730	20,800	29,700	10,630	17,620	25,400	7,170	12,110	17,910	4,560	7,740	11,780	3,530	5,990	9,150
		P _e	2.72	5.34	10.05	2.66	5.00	9.10	2.39	4.26	7.34	2.01	3.48	5.77	1.83	3.11	5.10
	32	Q ₀	11,990	19,580	-	9,990	16,560	23,800	6,690	11,280	16,670	4,190	7,100	10,790	3,200	5,420	8,270
		P _e	3.03	5.81	-	2.91	5.37	9.61	2.54	4.49	7.65	2.11	3.62	5.96	1.92	3.23	5.26
	43	Q ₀	10,530	-	-	8,740	14,190	-	5,710	9,600	13,910	3,400	5,820	8,750	2,490	4,260	6,540
		P _e	3.58	-	-	3.34	6.10	-	2.82	4.90	8.27	2.33	3.90	6.37	2.15	3.51	5.64

For Performance Data for Individual Input Data and Entire Application Range, Please Refer To Bitzer Software

DIMENSION

Model	Size (mm)						Weight (kg)*
	H	W	L	H*	W*	L*	
EPF2D030.0274.61	1,450	620	1,391	1,610	780	1,555	180
EPF4F050.0345.61	1,450	620	1,391	1,610	780	1,555	220
EPF4E060.0345.61	1,450	620	1,391	1,610	780	1,555	250

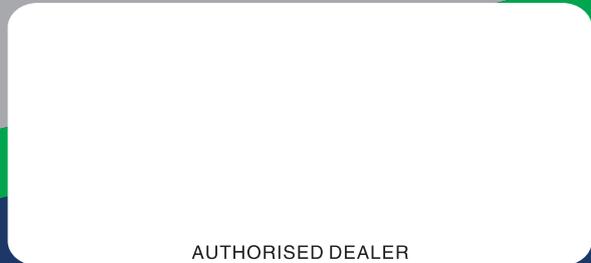
* Packed Dimensions / Weight





EDEN[®]
The Cool Solution

Visit Us:
www.edensolution.com



AUTHORISED DEALER

Eden accepts no responsibility for possible errors in catalogues, brochures and other printed materials. Eden reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed.