



AIR-COOLED CHILLERS



APPLIED SYSTEMS

R-407C



www.daikin.eu

EWAP800-C18AJYNN

EWAP850-C18AJYNN/A 

COOLING ONLY





ABOUT DAIKIN

Daikin has a worldwide reputation based on over 80 years' experience in the successful manufacture of high quality air conditioning equipment for industrial, commercial and residential use

Daikin Europe N.V.

LARGER OPERATION RANGE

The EWAP-AJYNN is available in 2 different versions with cooling capacities ranging from 790 to 1729kW.

The units are ideal for use in severe weather conditions and over a wide operation range. This major benefit results from the incorporation of an auto adaptive control system with the following functionality:

- > Head pressure setback for high ambient operation: on hot days, when cooling is most needed, Daikin chillers will stay on line by modulating the capacity control in function of the high pressure.
- > Optional: Head pressure control (OPFS and OPLA): fan control for low ambient down to -18°C

	Application	Sizes	Capacity range	EERavg	Sound level
Std	Standard efficiency	12	790-1650kW	2.3	101-104dBA
/A	High efficiency	18	854-1729kW	2.6	102-105dBA

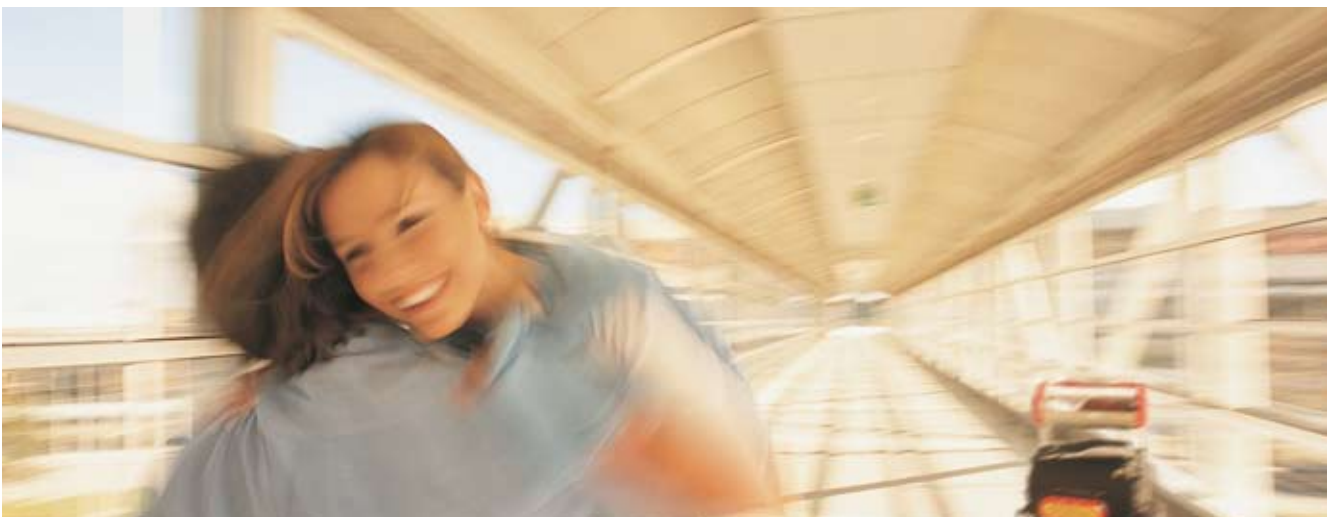
Following integrated options are available on request:

Hydronic:

- > OPSP – Single water circulation pump
- > OPTP – Twin water circulation pump
- > OPHP – High single pump
- > OPHT – High twin pump

Heat Recovery:

- > OPPR – Partial recovery
- > OPTR – Total recovery



LARGE FLEXIBILITY

In many applications there often exists a simultaneous cooling and heating demand requirement alongside one another. To benefit from this Daikin offers the full range of R-407C EWAP800-C18AJYNN(A) chillers with the option of heat recovery. This option further increases the application flexibility and extends possibilities in the hotel and leisure industry as well as the industrial and process sectors.

By energetically recovering useful heat from the cooling- cycle that would otherwise be rejected to the outside, extremely high COPs can be realised in heat recovery mode. The heat recovery unit aims to achieve an optimum balance between cooling and heat recovery to maximize the unit efficiency and offer savings in hot water production.

Sound level

Standard units and High efficiency units can be fitted with Option Reduced Noise (OPRN). OPRN includes lower speed condenser fans and flexible discharge pipes to reduce vibration and further minimise structural sound.

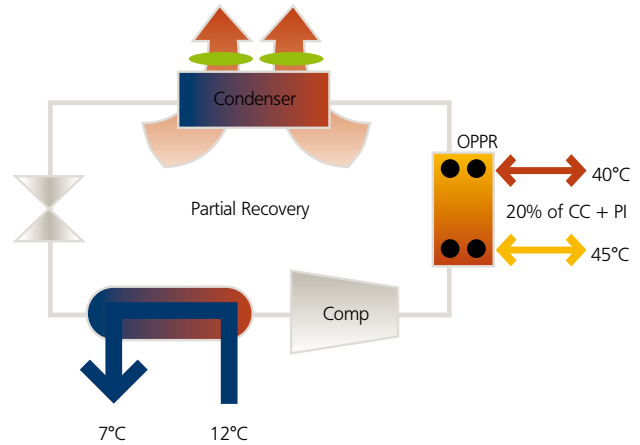
Both ranges can be fitted with Option Low Noise (OPLN). OPLN includes lower speed condenser fans, suction and discharge muffler and highly absorbent sound proof cabinets around the compressors

Heat recovery

Depending on the heating requirement either partial heat recovery (OPPR) or as a condenser full heat recovery (OPTR) may be selected.

OPPR – Partial recovery

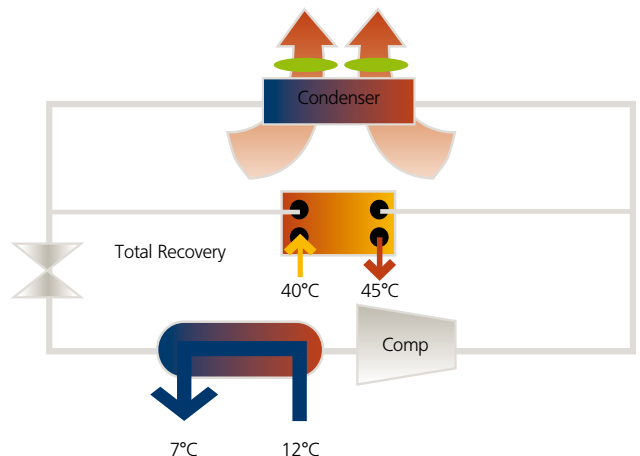
A stainless steel brazed plate heat exchanger is mounted in series between the compressor and air-cooled condenser as a desuperheater. The sensible heat from the hot discharge gas will be recovered, while the latent heat exchange will occur in the air-cooled condenser. The units efficiency is maintained as condensing pressure can be reduced due to air-cooled condenser becoming oversized.



Partial heat recovery $\pm 35\%$ of CC + PI

OPTR – Total recovery

A shell & tube heat exchanger is mounted in parallel with the air-cooled condenser for full heat recovery of both sensible and latent heat. Hot water temperatures up to 55°C can be achieved.



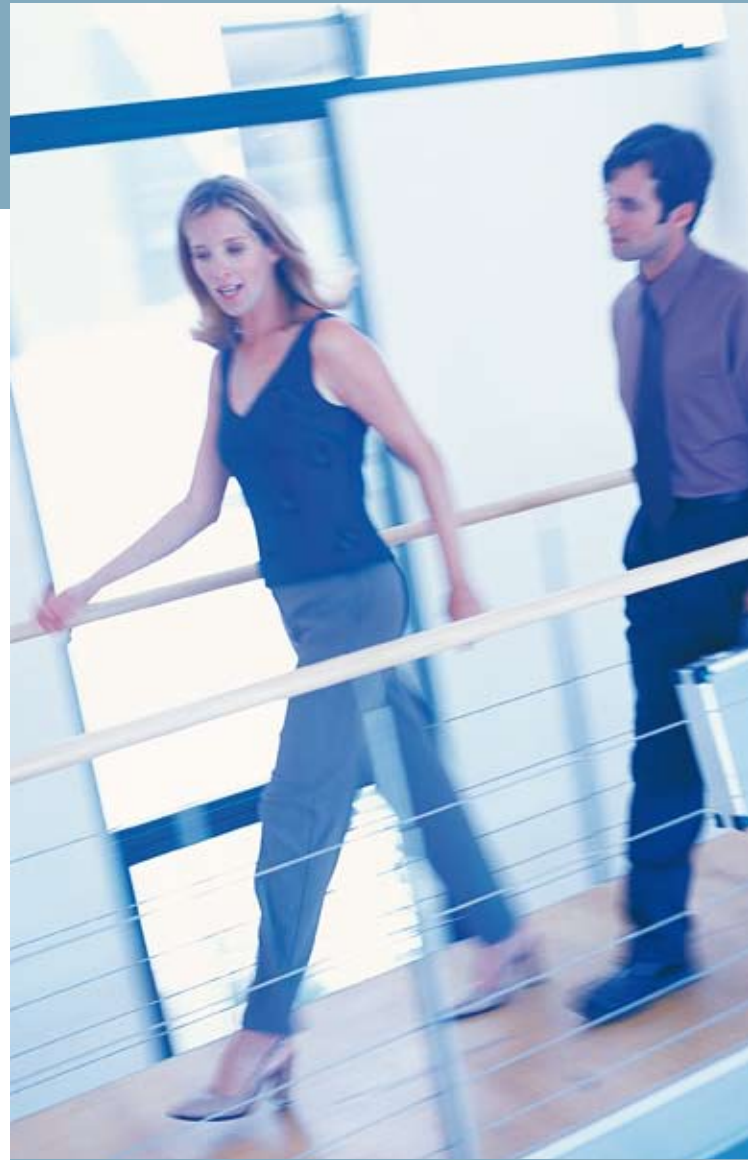


SINGLE SCREW COMPRESSOR

The EWAP-AJYNN(A) chillers are fitted with a single screw compressor with stepless capacity control. The capacity control enables the requirements to be closely matched by modulating the sliding valve position according to the chilled water control condition. Capacity control is infinitely variable between 12.5 and 100% on dual circuit units.

Main advantages:

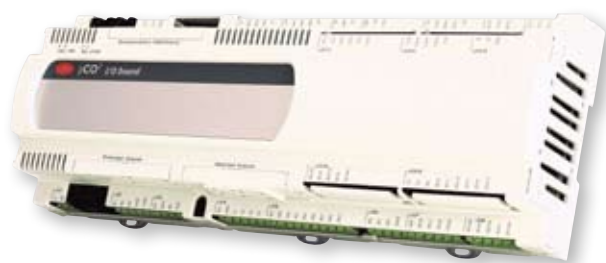
- › Better part load efficiency (ESEER)
- › More stable chilled water temperature
- › Closer control tolerance





ELECTRONIC CONTROL

- › Advanced pCO² control
- › Detailed information on and accurate control of all functional parameters by easy menu scrolling
- › Chilled water and brine temperatures down to -8°C on standard unit (to be set up by a certified engineer)
- › Changeable digital input/output such as remote on/off, dual setpoint and capacity limit
- › Lead lag function is standard
- › Standard equipped with night setback and peak load limitation
- › Remote DDC (EKRUPCJ) can be installed up to 1.000m from the unit



HEAT EXCHANGER

Condenser

- › Constructed from specially designed header distribution pipes, combined with internally grooved Hi-X tubing and Epoxy coated fins
- › Standard anti-corrosion treated to better withstand the effects of the external environment
- › Optional: Condenser protection grilles (OPCG) are available throughout the whole range

Shell & tube evaporator

- › Special high efficiency tubes with grooves on the inside
- › Special header distribution system and design of water system results in high efficiency and reduced heat transfer surface
- › Compact dimensions and lower weight result in a smaller refrigerant volume
- › Fitted standard with evaporator heater tape

Open Network Integration

Daikin has released a gateway for connection to BACnet, LonWorks and Modbus networks equipment and building control systems. BACnet, LonWorks and Modbus networks are recognised worldwide as the de facto standard within the building controls industry. BACnet, LonWorks and Modbus data communication protocols make it possible to control access, energy management, fire/life/safety, HVAC and lighting etc.

Simultaneous operation of up to 5 chillers is optional through EKCSII sequencing panel. This function enables a Daikin 9MW chiller plant to be operated via a single controller.

SPECIFICATIONS

STANDARD EFFICIENCY UNIT			800	900	950	C10	C11	
Capacity (Eurovent)	cooling	kw	790	875	944	1,026	1,092	
Nominal input (Eurovent)	cooling	kw	340	373	405	442	476	
Capacity Steps		%	Stepless 12.5-100					
EER			2.32	2.35	2.33	2.32	2.29	
ESEER			2.87	2.90	2.89	2.88	2.84	
Dimensions	height x width x depth	mm	2,520x6,210x2,230	2,520x7,110x2,230		2,520x8,010x2,230		
Weight	machine weight	kg	5,165	5,425	5,555	5,795	5,905	
	operating weight	kg	5,430	5,710	5,840	6,070	6,180	
Water Heat Exchanger Evaporator	type		Shell and tube					
	minimum water volume in the system	l	278	271		256		
	water flow rate	min	l/min	882	1,090	1,096	1,371	1,373
		nominal	l/min	2,265	2,508	2,706	2,941	3,130
max		l/min	2,788	3,445	3,465	4,337	4,341	
nominal water pressure drop	cooling	kpa	66	53	61	46	52	
Air heat exchanger	type		Grooved tubes and ALU coated loured fins					
Fan	nominal air flow	m ³ /min	3,978	4,314	4,644	4,974	5,304	
	speed	rpm	860					
Compressor	type		Semi-hermetic single screw compressor					
	model	quantity	2					
Sound Power	cooling	dba	101	102		103		
Operation Range	water side	min ~ max	°c					
	air side	min ~ max	°cdb					
Refrigerant circuit	refrigerant type		R-407C					
	refrigerant charge	kg	120	130	140	150	160	
	no of circuits		2					
	refrigerant control		Electronic expansion valve					
Power Supply			3 ~ /400V/50Hz					
Piping connections	evaporator water inlet/outlet		Victaulic, diameter 219.1mm					
	evaporator water drain		1/2" gas					

HIGH EFFICIENCY UNIT (A)			850	900	950	C10	C11	
Capacity (Eurovent)	cooling	kw	854	954	1,028	1,124	1,196	
Nominal input (Eurovent)	cooling	kw	319	354	386	424	458	
Capacity Steps		%	Stepless 12.5-100					
EER			2.68	2.69	2.66	2.65	2.61	
ESEER			3.20	3.24		3.21	3.17	
Dimensions	height x width x depth	mm	2,520x6,102,230	2,520x8,910x2,230		2,520x9,810x2,230		
Weight	machine weight	kg	5,900	6,170	6,290	6,525	6,645	
	operating weight	kg	6,185	6,440	6,560	6,780	6,900	
Water Heat Exchanger Evaporator	type		Shell and tube					
	minimum water volume in the system	l	271	256		270		
	water flow rate	min	l/min	1,084	1,351	1,374	1,169	1,176
		nominal	l/min	2,448	2,735	2,947	3,222	3,429
max		l/min	3,428	4,271	4,345	3,696	4,934	
nominal water pressure drop	cooling	kpa	51	41	46	76	85	
Air heat exchanger	type		Grooved tubes and ALU coated loured fins					
Fan	nominal air flow	m ³ /min	5,310	5,640	5,970	6,300	6,636	
	speed	rpm	860					
Compressor	type		Semi-hermetic single screw compressor					
	model	quantity	2					
Sound Power	cooling	dba	102		103			
Operation Range	water side	min ~ max	°c					
	air side	min ~ max	°cdb					
Refrigerant circuit	refrigerant type		R-407C					
	refrigerant charge	kg	160	170	180	190	200	
	no of circuits		2					
	refrigerant control		Electronic expansion valve					
Power Supply			3 ~ /400V/50Hz					
Piping connections	evaporator water inlet/outlet		Victaulic, diameter 219.1mm					
	evaporator water drain		1/2" gas					

OPTIONS & ACCESSORIES

Reference	Products	Integrated Hydraulics					Noise & Head Pressure Control				
		Single pump	Twin pump	High ESP pump	High ESP twin pump	Buffer tank	Reduced Noise	Low noise	Fan Silent	Low Ambient	High ESP fans
		OPSP	OPTP	OPHP	OPHT	OPBT	OPRN	OPLN	OPFS	OPLA	OPHF
EWAP-AJYNN	800-900-950-C10-C11-C12-C13-C14	•	•				•	•	•	•	•(5)
	C15-C16-C17-C18						•	•	•	•	•(5)
EWAP-AJYNN / A	850-900-950-C10-C11-C12-C13-C14	•	•				•	•	•	•	•(5)
	C15-C16-C17-C18						•	•	•	•	•(5)

(4) High Pressure Side Gauge

(5) Not Available With Option OPLN - OPRN

(s) OP12 & OP03 needs to be added to meet Swedish national law 1992: 16

C12	C13	C14	C15	C16	C17	C18
1,158	1,284	1,354	1,426	1,516	1,583	1,650
507	546	578	609	647	682	717
Stepless 8.3-100						
2.28	2.35		2.34		2.32	2.3
2.90		2.98	2.97	2.98	2.95	2.93
2,520x9,170x2,230	2,520x10,070x2,230		2,520x10,970x2,230		2,520x11,870x2,230	
7,990	8,305	8,435	8,890	8,905	9,155	9,265
8,270	8,775	8,905	9,360	9,350	9,600	9,710
Shell and tube						
263		432			419	
1,212	1,614	1,626	1,642	2,357	2,359	2,365
3,320	3,681	3,882	4,088	4,346	4,538	4,730
3,833	5,104	5,141	5,192	7,453	7,460	7,479
75	52	57	62	34	37	40
Grooved tubes and ALU coated loured fins						
5,970	6,300	6,636	7,440	7,296	7,632	7,962
860						
Semi-hermetic single screw compressor						
3						
103				104		
-8~10						
-18(OPLA)~42						
R-407C						
180	190	200	210	220	230	240
3						
Electronic expansion valve						
3~ /400V/50Hz						
Victaulic, diameter 219.1mm						Victaulic, diameter 273mm
1/2" gas						

C12	C13	C14	C15	C16	C17	C18
1,253	1,357	1,427	1,497	1,595	1,644	1,729
476	512	542	575	611	654	678
Stepless 8.3-100						
2.63	2.65	2.63	2.6	2.61	2.51	2.55
3.24	3.28	3.26	3.22	3.24	3.12	3.18
2,520x11,870x2,230	2,520x12,770x2,230		2,520x13,670x2,230		2,520x14,570x2,230	
9,050	9,505	9,625	10,060	10,075	10,410	10,470
9,320	9,980	10,100	10,530	10,520	10,860	10,920
Shell and tube						
278		432			419	
1,560	1,629	1,643	1,634	2,346	2,356	2,390
3,592	3,890	4,091	4,291	4,572	4,713	4,957
4,934	5,153	5,195	5,166	7,417	7,452	7,559
53	57	62	69	38	40	43
Grooved tubes and ALU coated loured fins						
7,962	8,292	8,622	9,468	9,288	9,618	9,948
860						
Semi-hermetic single screw compressor						
3						
	104				105	
-8~10						
-18(OPLA)~46						
R-407C						
240	250	260	270	280	290	300
3						
Electronic expansion valve						
3~ /400V/50Hz						
Victaulic, diameter 219.1mm						Victaulic, diameter 273mm
1/2" gas						

Heat Recovery		LWE		Electrical					Refrigerant				Condenser				Misc
Total Heat Recovery	Partial Heat Recovery	High Glycol	Low Glycol	Evaporator heater tape	Main switch	Soft starter	Power factor 0.9	A / V meter	Electronic Expansion Valve	Pressure relief valve	Suction stop valve	Gauges	Coil guards	Blank Cu / Al coils	Cu / Sn coils	Cu / Cu coils	Spring Anti Vibration Mounts
OPTR	OPPR	OPZH	OPZL	OP10	OP52	OPSS	OPPF	OP57	OPEX	OP03	OP12	OPGA	OPCG	OPAL	OPSN	OPCU	OPSVM
•	•	STD	STD	STD	STD	•	•	•	STD	•(s)	•(s)	•(4)	•	•	•	•	•
•	•	STD	STD	STD	STD	•	•	•	STD	•(s)	•(s)	•(4)	•	•	•	•	•
•	•	STD	STD	STD	STD	•	•	•	STD	•(s)	•(s)	•(4)	•	•	•	•	•
•	•	STD	STD	STD	STD	•	•	•	STD	•(s)	•(s)	•(4)	•	•	•	•	•

OPTIONS & ACCESSORIES

Reference	Communication cards		Modbus gateway Bacnet gateway	Remote user interface	Buffer tanks	
	EKAC200J	EKACLON	EKBMSBJ	EKRUPCK	EKBT500N	EKBTC10N
EWAP800-C18AJYNN EWAP850-C18AJYNN/A	• •	• •	• •	• •	• •	• •

Reference	Buffer tanks		Sequencing Panel	Plant Visor	Modem		Converter RS485 to RS232	Converter RS485 to USB
	EKBT500C	EKBTC10C	EKCSCII	EKPV2J	EKMODEM	EKGSMOD	EKCON	EKCONUSB
EWAP800-C18AJYNN EWAP850-C18AJYNN/A	• •	• •	• •	• •	• •	• •	• •	• •

ENVIRONMENTAL AWARENESS

Daikin and the Environment

In recent years, motivated by a global awareness of the need to reduce the burdens on the environment, some manufacturers including Daikin have invested enormous efforts in limiting the negative effects associated with the production and the operation of chillers.

Hence, models with energy saving features and improved eco-production techniques have seen the light of day, making a significant contribution to limiting the impact on the environment.



Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues.

For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment. This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.



Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.



ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.



Daikin units comply with the European regulations that guarantee the safety of the product.

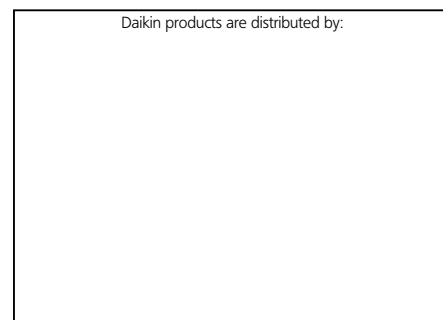
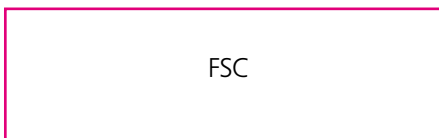


Daikin Europe N.V. participates in the Eurovent Certification Programme for Air Conditioners (AC), Liquid Chilling Packages (LCP) and Fan Coil Units (FC); the certified data of certified models are listed in the Eurovent Directory. Certification is valid for air cooled models <600kW and water cooled models <1500kW.

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DAIKIN EUROPE N.V.

Naamloze Vennootschap
Zandvoordestraat 300
B-8400 Oostende, Belgium
www.daikin.eu
BTW: BE 0412 120 336
RPR Oostende



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