

Air-cooled chillers

EWAP110-540MBYN
Applied systems



R-407C



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 environmental friendly products.

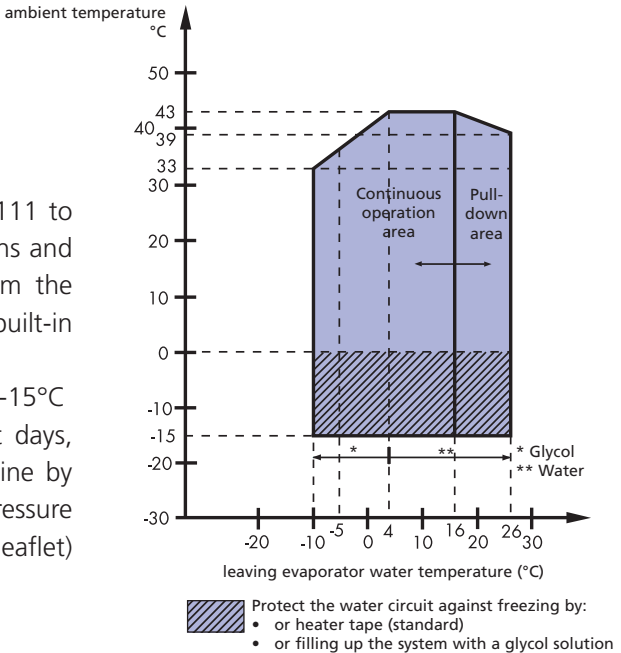
This challenge demands the eco design and development of a wide range of products and an energy management system; which involves energy conservation and reduction of waste.



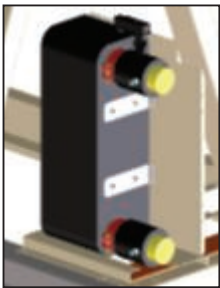
Flexible application

9 models are available with cooling capacities ranging from 111 to 541kW. 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 built-in functions that include:

- head pressure control: fan control for low ambient down to -15°C
- 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
- full range also available with heat recovery condenser (see leaflet)



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Easy installation

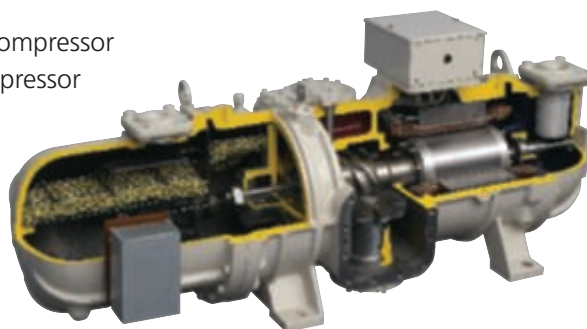
- flow switch standard supplied with the unit
- water filter with a perforation diameter of 1mm supplied as standard accessory





Single screw *compressor*

The new large Daikin chillers are fitted with a G-type single screw compressor with stepless capacity control. The G-type stepless single screw compressor enables capacity requirements to be closely matched by modulating the sliding valve position according to the chilled water control condition. Main advantages of continuous modulation are better part load efficiency and more stable chilled water temperatures with closer control tolerance. Capacity control is infinitely variable between 30 and 100% on single circuit units and between 15 and 100% on dual circuit units.



Heat *exchanger*

CONDENSER

- condenser coils are constructed from specially designed header distribution pipes, combined with internally grooved Hi-X tubing and PE coated waffle louvre pressed fins
- all condenser coils are standard anti-corrosion treated to better withstand the effects of the external environment
- condenser protection grilles are available throughout the whole range

BPHE EVAPORATOR

- brazed plate heat exchanger made of stainless steel plate, brazed gas tight with copper
- optimised distribution and counterflow arrangement
- benefits of R-407C
- fitted standard with evaporator heater

Electronic *control*

- advanced pCO² control
- detailed information on and accurate control of all functional parameters by easy menu scrolling: schedule timer, floating set point, free cooling, double evaporator pump, manual pump on, date and time information, daily pump on
- chilled water and brine temperatures down to -10°C on standard unit (parameter in the service menu of the DDC controller must be set by the installer)
- changeable digital input/output such as remote on/off, remote cooling/heating, dual setpoint and limit capacity
- self diagnostic and can be set up in several languages
- lead lag function is standard
- standard equipped with night setback and peak load limitation
- remote DDC (EKRUPC) can be installed up to 1,000m from the unit
- thanks to the standard DICN, simultaneous operation of up to 4 chillers is allowed (this function enables a Daikin 2MW chiller plant to be operated via a single controller)



EWAP-MBYN

			110	140	160	200	280	340	400	460	540
Nominal capacity	cooling	kW	111	144	164	199	285	349	395	468	541
Nominal input	cooling	kW	41.9	51.8	64.3	78.1	108	140	156	189	222
EER			2.65	2.78	2.55	2.55	2.64	2.49	2.53	2.48	2.44
Capacity steps		%	30 ~ 100						15 ~ 100		
Water heat exchanger			Braze plate heat exchanger, one per circuit								
Refrigerant circuit	type		R-407C								
	charge	kg	27	39	42	58	84	84	128	129	130
	control		Thermostatic expansion valve								
	oil type		FVC68D								
Compressor	oil charge	l	5.5	5.5	7.5	7.5	10	10	2 x 7.5	7.5 + 10	2 x 10
	type		Semi-hermetic single screw compressor								
Air heat exchanger	no. of circuits/compressors		1/1				2/2				
	type		Cross fin coil / Hi-X tubes and polyethylene coated waffle louvre fins								
	air flow rate	m ³ /min	960	960	960	1,920	1,920	1,920	2,880	2,880	2,880
Dimensions	H x W x D	mm	2,250 x 2,346 x 2,238			2,250 x 4,280 x 2,238			2,250 x 5,901 x 2,238		
Machine weight		kg	1,417	1,571	1,660	2,203	2,583	2,633	4,865	4,988	5,111
Operation weight		kg	1,425	1,584	1,676	2,223	2,610	2,667	4,939	5,069	5,199
Sound power level	standard/low noise option	dB(A)	89	94	94	95	96	98	99	99	99
Casing	material		Polyester coated galvanised steel plate								
	colour		Ivory white / Munsell code 5Y75/1								
Piping connections	evaporator water in/outlet		Flexible coupling + counterpipe for welding 3"OD			Flexible coupling + counterpipe for welding 3"			Flexible coupling + counterpipe for welding 5"		
	evaporator water drain		Field installation			1/4"G					
Safety and functional devices			Double PED approved high pressure switches / Low pressure protection / Pressure relief valve on condenser/compressor motor thermal protector / Compressor motor overcurrent relay / Discharge temperature controller / Freeze up protection/recycling and guard timer / Reverse phase protector / Flow switch								
Operation range	air side	°C	-15°C ~ 43°C								
	water side	°C	-10°C ~ 26°C								
Power supply		YN	3 ~ /50Hz/400V								

Notes:

1. Nominal cooling capacity at Eurovent conditons: evaporator: 12°C/7°C; ambient: 35°C.
2. Nominal cooling power input at Eurovent conditons: evaporator: 12°C/7°C; ambient: 35°C.
3. The sound power level is an absolute value indicating the "power" which a sound source generates.

Option Number	Option description	Unit size									Availability	
		110	140	160	200	280	340	400	460	540		
OPHR	Heat recovery	o	o	o	o	o	o	o	o	o	o	Separate model
OPIF	Inverter fans	o	o	o	o	o	o	o	o	o	o	Factory mounted
OPHF	High esp fans	o	o	o	o	o	o	o	o	o	o	Factory mounted
Completely combinable options												
OP03	Dual pressure relief valve	o	o	o	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	Factory mounted
OP12	Suction stop valve	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	o (S)	Factory mounted
OP52	Main isolator switch	o	o	o	o	o	o	o	o	o	o	Factory mounted
OP57	A-meter / V-meter	o	o	o	o	o	o	o	o	o	o	Factory mounted
OPLN	Low noise operation	o	o	o	o	o	o	o	o	o	o	Factory mounted
OPCG	Condenser protection grilles	o	o	o	o	o	o	o	o	o	o	Factory mounted
Available kits												
EKCLWS	Leaving water controlsensor for DICN	o	o	o	o	o	o	o	o	o	o	Kit
EKAC200A	BMS card	o	o	o	o	o	o	o	o	o	o	Kit
EKBMSMBA	BMS gateway modbus/-bus protocol	o	o	o	o	o	o	o	o	o	o	Kit
EKBMSBNA	BMS gateway bacnet protocol	o	o	o	o	o	o	o	o	o	o	Kit
EKRUPC	Remote user interface	o	o	o	o	o	o	o	o	o	o	Kit

To install EKBMSMBA, EKBMSBNA --> EKAC200A needs to be installed on the unit
o available
(S) Option required for Swedish National law SNFS 1992:16



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.



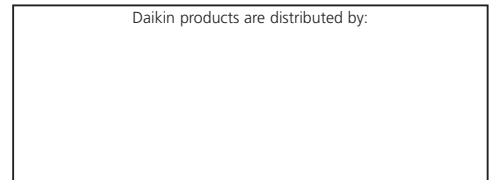
Daikin units comply with the European regulations that guarantee the safety of the product.



Daikin Europe NV 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.

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