

Air-cooled chillers

EWAD120-600MBYN
Applied systems



R-134a



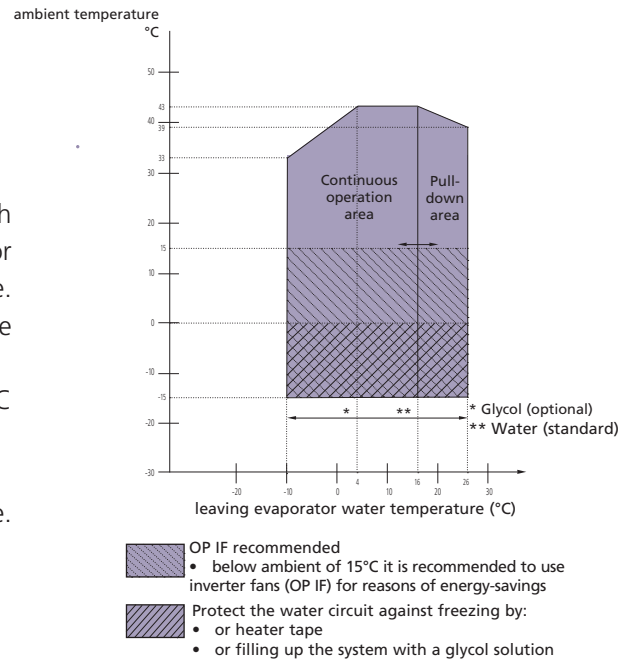
Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues. For several years Daikin has had the intention to become a leader in the provision of environmental friendly products. This challenge demands 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

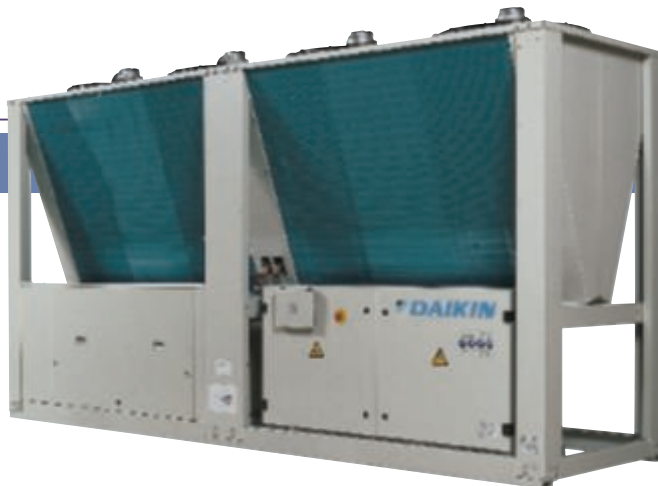
10 models (double circuit units from 240kW on) are available with cooling capacities ranging from 120 to 316kW. The units are ideal for use in severe weather conditions and over a wide operation range. This major benefit results from the incorporation of an auto adaptive control system with built-in 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.



Easy installation

- flow switch standard supplied with the unit
- standard fitted with victaulic joints on evaporator:
 - victaulic joints absorb vibrations, reduce operating sound and thermal deflection and simplify chiller piping and installation.
 - they can accommodate 8° angles and guarantee stress free, leak tight water piping connection.





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

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

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)



EWAD-MBYN

			120	150	170	240	300	340	380	460	520	600		
Nominal capacity	cooling	kW	121	149	171	226	286	330	372	449	525	605		
Nominal input	power input	kW	41.1	54.1	64.9	83.7	105	136	130	170	210	263		
Capacity steps		%	30 ~ 100% stepless				15 ~ 100% stepless							
Water heat exchanger	type		Shell and tube heat exchanger											
Nominal water pressure drop		kPa	31.7	18.6	24.8	41.0	36.6	49.1	20.8	25.6	35.1	46.6		
Refrigerant circuit	type		R-134a											
	charge	kg	26	37	42	30+30	41+41	44+44	65+65	65+70	70+70	70+70		
	control		Thermostatic expansion valve					Electronic expansion valve						
	oil type		FVC68D											
	oil charge	l	7.5	7.5	10	2x7.5	2x7.5	2x10	2x10	10+14	2x14	2x14		
Compressor	type		Semi-hermetic single screw compressor											
	no. of circuits/compressors		1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2	2/2	2/2		
Air heat exchanger	type		Cross fin coil / Hi-X tubes and Polyethylene coated waffle louvre fins											
	air flow rate	m ³ /min	960			1,920			2,250x5,901x2,238					
Dimensions (HxWxD)		mm	2,221x3,973x1,109			2,250x4,280x2,238			2,250x5,901x2,238					
Machine weight		kg	1,391	1,600	1,705	2,710	3,210	3,260	5,335	5,595	5,775	5,855		
Operation weight		kg	1,441	1,663	1,768	2,790	3,340	3,390	5,497	5,779	5,959	6,039		
Sound power level		dBa	87	94	92	90	97	95	97	98	100	101		
Casing	material		Polyester painted galvanised steel plate											
	colour		Ivory white / Munsell code 5Y7.5/1											
Piping connections	evaporator in/outlet		3x victaulic coupling	4x victaulic coupling			5x victaulic coupling			6x victaulic coupling				
	evaporator water drain		1/2" G-F UNI-ISO 228/1											
Safety and functional devices			Double PED approved high pressure switches / Low pressure protection / Pressure relief valve / Compressor motor thermal protector / Compressor motor overcurrent relay / Discharge temperature protection / Freeze-up protection / Recycling and guard timer / Reverse phase protector / Flow switch											
Operation range	air side	°CDB	-15°C ~ 43°C											
	water side	°CDB	4°C (-10°C as option) ~ 26°C											
Power supply		YN	400V/3 ~ 50Hz											

- NOTES : 1. Nominal cooling capacity at Eurovent conditions: evaporator: 12°C/7°C; ambient: 35°C
 2. Nominal cooling power input at Eurovent conditions: 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
		120	150	170	240	300	340	380	460	520	600	
Not completely combinable options												
OPHF	High esp fans	0	0	0	0	0	0	0	0	0	0	factory mounted
Completely combinable options												
OP03	Dual pressure relief valve	0	0	0	0	0	0	0 (S)	0 (S)	0 (S)	0 (S)	factory mounted
OP12	Suction stop valve	0 (S)	0 (S)	0 (S)	0 (S)	0 (S)	0 (S)	0 (S)	0 (S)	0 (S)	0 (S)	factory mounted
OP52	Main isolator switch	0	0	0	0	0	0	0	0	0	0	factory mounted
OP57	A-meter / V-meter	0	0	0	0	0	0	0	0	0	0	factory mounted
OPLN	Low noise operation	0	0	0	0	0	0	0	0	0	0	factory mounted
OPCG	Condenser protection grilles	0	0	0	0	0	0	0	0	0	0	factory mounted
Available kits												
EKCLWS	Leaving water control sensor for DICON	0	0	0	0	0	0	0	0	0	0	kit
EKAC200A	BMS card	0	0	0	0	0	0	0	0	0	0	kit
EKBMSMBA	BMS gateway modbus-f-bus protocol	0	0	0	0	0	0	0	0	0	0	kit
EKBMSBNA	BMS gateway bacnet protocol	0	0	0	0	0	0	0	0	0	0	kit
EKRUPC	Remote user interface	0	0	0	0	0	0	0	0	0	0	kit

0 available

(S) option required for Swedish national law SNFS 1992:16

To install EKBMSMBA, EKBMSBNA → EKAC200A needs to be installed on the unit



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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