AIR-COOLED
CHILLERS

APPLIED SYSTEMS

R-134a

www.daikin.eu

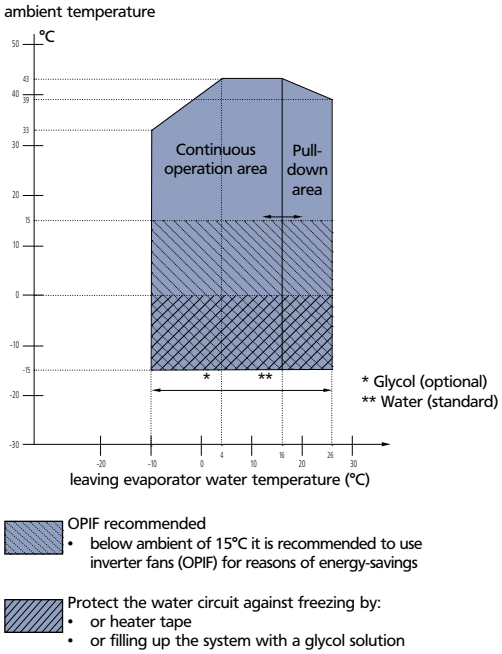
EWAD120-600MBYN

COOLING ONLY

ENVIRONMENTAL AWARENESS

Daikin and the Environment

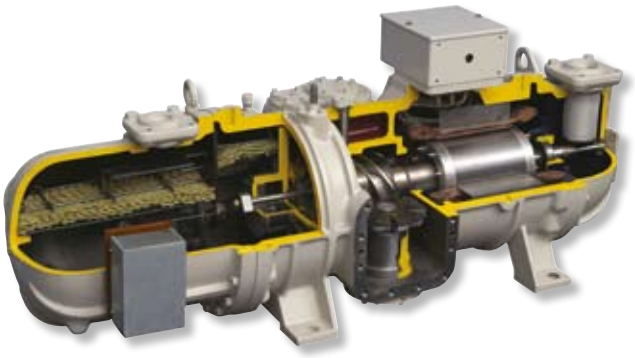
In recent years, motivated by a global awareness of the need to reduce the burdens on the environment, some manufacturers including Daikin have invested enormous efforts in limiting the negative effects associated with the production and the operation of chillers. Hence, models with energy saving features and improved eco-production techniques have seen the light of day, making a significant contribution to limiting the impact on the environment.



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.



SINGLE SCREW COMPRESSOR

The 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.

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.

HEAT EXCHANGER

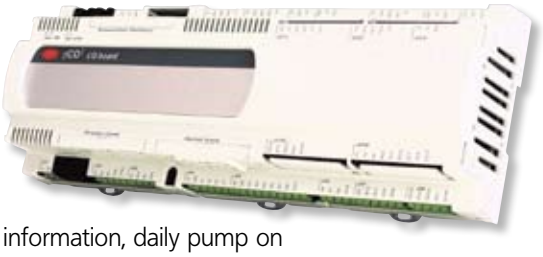
condenser

- 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 pCO^2 control
- Detailed information on and accurate control of all functional parameters by easy menu scrolling: schedule timer, floating setpoint, 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)

DICN
Daikin Integrated Chiller Network

Cooling only				120	150	170	240	300	340	380	460	520	600
Capacity			kW	121	149	171	226	286	330	372	449	525	605
Nominal input	Cooling		kW	41.1	54.1	64.9	83.7	105	136	130	170	210	263
EER				2.94	2.75	2.63	2.7	2.72	2.43	2.86	2.64	2.5	2.3
Capacity Steps			%	30-100			15-100						
Dimensions	(Height x Width x Depth)		mm	2,221x3,973x1,109			2,250x4,280x2,238			2,250x5,901x2,238			
Unit			kg	1,391	1,600	1,705	2,710	3,210	3,260	5,335	5,595	5,775	5,855
Operating Weight			kg	1,441	1,663	1,768	2,790	3,340	3,390	5,497	5,779	5,959	6,039
Water Heat Exchanger	Type			Shell and tube									
	Minimum water volume in the system		l	590	730	840	550	700	810	910	1,100	1,280	1,480
	Water flow rate	Min	l/min	150	200		300	395		540	640		870
		Max	l/min	490	725		930	1,165		1,580	1,880		
	Nominal Water pressure drop	Cooling	kPa	40.1	18.6	24.8	41	36.6	49.1	20.8	25.6	35.1	46.6
Air heat exchanger	Type			Cross fin coil/Hi-X tubes and PE coated waffle louvre fins									
Sound Power		Cooling	dBA	87	94	92	90	97	95	97	98	100	101
Compressor	Type			Semi-hermetic single screw compressor									
	Model	Quantity		1			2						
Refrigerant circuit	Refrigerant type			R-134a									
	Refrigerant charge		kg	26	37	42	30	41	44	65	70		
	No of circuits			1			2						
	Refrigerant control			Thermostatic expansion valve						Electronic expansion valve			
Operation range	Air side		°CDB	-15°C ~ 43°C									
	Water side		°CDB	4°C (-10°C as option) ~26°C									
Power Supply				3~/400V/50Hz									
Piping connections	Evaporator water inlet/outlet			3'' vc	4'' victaulic coupling			5'' victaulic coupling		6'' victaulic coupling			
	Evaporator water drain			1/2" g-f uni-iso 228/1									

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	o	o	o	o	o	o	o	o	o	o	factory mounted
Completely combinable options												
OP03	Dual pressure relief valve	o	o	o	o	o	o	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 control sensor 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/j-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

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

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.

Daikin products are distributed by:

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