



AIR-COOLED CHILLERS



APPLIED SYSTEMS

R-407C



www.daikin.eu

EUWA*5-24KAZW
EUWY*5-24KAZW

COOLING ONLY



-

HEAT PUMP

-

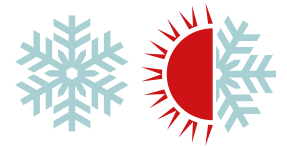


ENVIRONMENTAL AWARENESS

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 AND EASY INSTALLATION

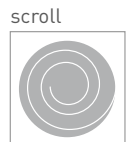


7 cooling only (11 – 55kW) and heat pump (cooling 9 – 50kW and heating 12 – 54kW) models are available, each comprising 3 different modular based design options.

Top of the range is model 'B' – an "all in one" version, complete with hydraulic module incorporating 55 liter buffer tank, pump, 12 liter expansion vessel, air purge, manometer, shut off valve and optional freeze protection.

A slightly lower specification version – model 'P' is similar to the B-version, but does not contain a buffer tank. The third option is a basic model 'N', without hydraulic module. Main switch, flow switch and water filter are fitted as standard to all 3 options.

ENERGY EFFICIENT SCROLL COMPRESSOR



The heart of the unit is the Daikin hermetic multiple scroll compressor, designed to the very highest technical standards and optimised for use with R-407C refrigerant. Pressure losses are minimised by reduced axial clearance and the scroll centre has been redesigned to reduce over consumption. Improved motor efficiency ensures an optimal performance and a compressor EER rating of 3.5 minimum. Volumetric efficiency is enhanced by better suction gas distribution and controlling superheat generated by the scroll.

The presence of more than 1 million of these units in the field is testament to their low power consumption, high compression efficiency, low operating sound levels and starting torque and ability to operate in world wide environments.

EFFICIENT HEAT TRANSFER

The use of a brased, stainless plate heat exchanger for the evaporator ensures maximum heat transfer between refrigerant and water circuits within minimal and compact areas with high W/m^2 values that ensure optimum efficiency. Plate heat exchangers also offer more efficient pump selection than can be achieved with other types of heat exchangers. Also, the counter flow design utilised for refrigerant and water overcomes all problems associated with R-407C temperature glide characteristics.

Condenser coils are constructed from specially designed header distribution pipes, in combination with internally grooved Hi-X tubing and aluminium waffle louvre pressed fins. This unique combination of increased contact surfaces and reduced overall coil size, results in optimum heat transfer efficiency. Protection against severe weather conditions is provided by special polyethylene (PE) treatment of the condenser coils.



FLEXIBLE CONTROL

The chiller is fitted with a μ chiller auto diagnostic controller enabling it to be integrated with a building management system (BMS) which can monitor and control chillers, lighting, alarms and ventilation, etc. The Daikin BMS connection supports popular standard protocols such as MODBUS, J-BUS and BACNET and consists of built-in address cards for each chiller and a single gateway that can link as many as 16 units to the BMS. The BMS supports the complete operation of the chiller and can also monitor and control more than 130 parameters including unit settings, status, temperatures, pressures, alarm, set points and on/off operation. A remote user interface is also available as option.



UNIT IMPROVEMENTS

Numerous refinements have been incorporated in the range. All components are easily accessible for maintenance and the service door fixings are of improved quality. Also, power can be cut via the main switch before the door is opened. A single interface is used throughout the entire range and can be accessed without tools. Pump start-up can be achieved manually when the chiller is switched off and an additional connection has been fitted in the switchbox for field installed heater tape.

SOUND

Sound suppression – an important factor of everyday life – is afforded high priority by Daikin and the company has long-term experience in suppressing operational sound levels and reducing vibrations by means of special piping design.



3 DIFFERENT DESIGN OPTIONS

EUWA*-KAZW/EUWY*-KAZW (B/P/N)

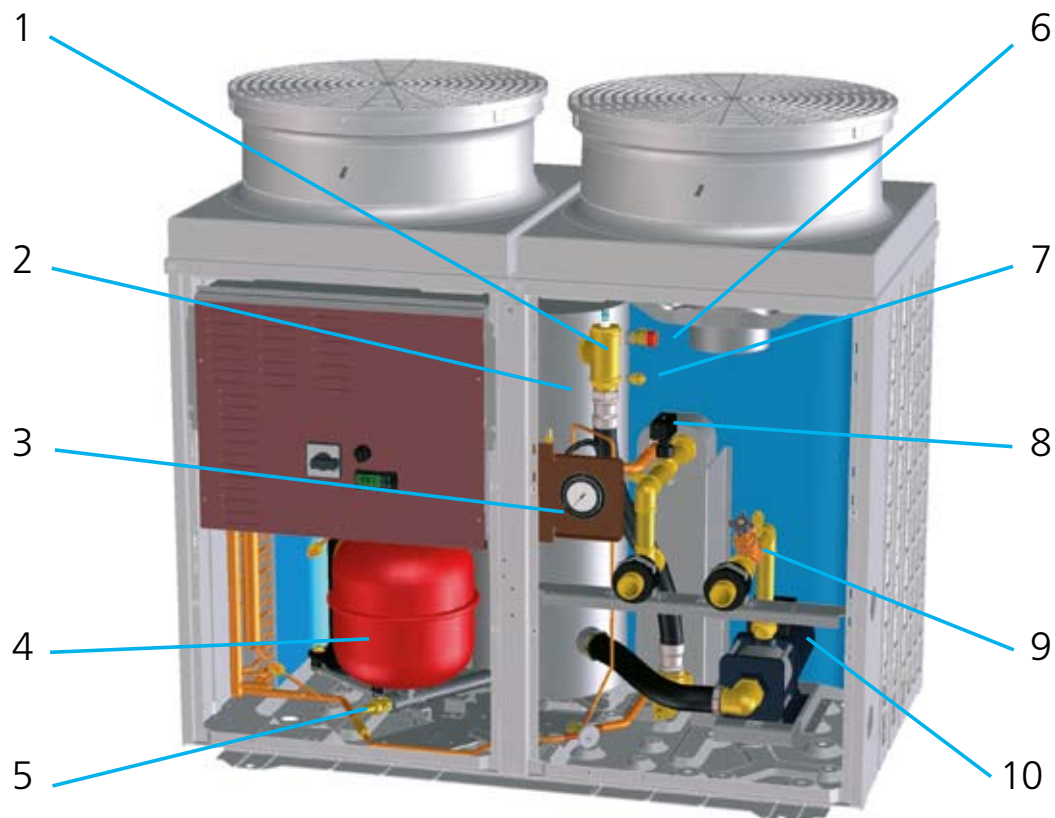
B-type = EUWA/EUWY chiller + integrated hydraulic module

- > buffer tank
- > pump
- > expansion vessel
- > hydraulic components

P-type = EUWA/EUWY chiller + integrated hydraulic module

- > pump
- > expansion vessel
- > hydraulic components

N-type = EUWA/EUWY chiller without integrated hydraulic module



- | | |
|------------------------|------------------------------|
| 1 Air purge | 6 Safety valve |
| 2 Buffer tank | 7 Pressure port |
| 3 Water Pressure gauge | 8 Flow switch |
| 4 Expansion vessel | 9 Water flow adjusting valve |
| 5 Drain | 10 Pump |

Description	EUWAB-KAZW	EUWAP-KAZW	EUWAN-KAZW
	EUWYB-KAZW	EUWYP-KAZW	EUWYN-KAZW
Pressure regulating valve	YES	YES	-
Pump	YES	YES	-
Pressure port pump	YES	YES	-
Filter (delivered as a kit with the unit)	YES	YES	YES
Safety valve	YES	YES	-
Manometer	YES	YES	-
Expansion vessel	YES	YES	-
Drain valve	YES	YES	YES
Fill valve	YES	YES	-
Shut off valves for easy water filter cleaning	YES	YES	YES
Air purge	YES	YES	YES
Buffer tank	YES	-	-
Freeze protection	YES	YES	YES
Evaporator	YES	YES	YES
Flow switch	YES	YES	YES
Pressure port evaporator	YES	YES	YES
Water temperature sensor in	YES	YES	YES
Water temperature sensor out	YES	YES	YES

Cooling Only			EUWA*5KAZW			EUWA*8KAZW			EUWA*10KAZW			EUWA*12KAZW		
			B	P	N	B	P	N	B	P	N	B	P	N
Nominal capacity	cooling	kW	11.3			17.9			22.5			26.5		
Nominal input	cooling	kW	4.64		4.52	7.39		7.38	8.74		8.79	11.5		11.5
EER			2.44		2.51	2.42		2.42	2.57		2.56	2.30		2.30
Capacity steps			0~100			0~100			0~100			0~100		
Nominal pressure drop		kPa	24			38			43			37		
Refrigerant circuit	type		R-407C											
	charge	kg	3.9			4.6			4.6			6.0		
	control		Thermostatic expansion valve											
	oil type		FVC68D											
Compressor	oil charge	l	1.5			2.7			2.7			2.7		
	type		Hermetically sealed scroll compressor											
	no. of circuits/compressors		1/1			1/1			1/1			1/1		
Air heat exchanger			Cross fin coil / Hi-X tubes and PE coated waffle louvre fins											
Nominal static height unit		kPa	205		-	154		-	123		-	105		-
Expansion tank		l	12		-	12		-	12		-	12		-
Buffer tank		l	55	-		55	-		55	-		55	-	
Dimensions	HxWxD	mm	1,230x1,290x734						1,450x1,290x734					
Machine weight		kg	180	168	150	241	229	215	271	259	245	274	262	248
Operation weight		kg	239	171	152	300	232	218	330	262	248	335	265	251
Sound power level		dB(A)	67			76			78			78		
Casing	material		Polyester coated galvanised steel plate											
	colour		Ivory white / Munsell code 5Y7.5/1											
Piping connections			1-1/4"			1-1/4"			1-1/4"			1-1/4"		
Safety & functional devices			High pressure switch / Low pressure switch / Discharge temperature control / Outlet water temperature protection / Compressor motor overcurrent / Pump motor overcurrent / Fan thermal protector / Anti-recycling and guard timer / Digital display controller with electronic temperature control / Reverse phase protector / Flowswitch											
Operation range	air side	°C	-15°C ~ 43°C											
	water side	°C	5°C (-10°C as option) ~ 25°C											
Power supply		W1	3N~/400V/50Hz											

Cooling Only			EUWA*16KAZW			EUWA*20KAZW			EUWA*24KAZW					
			B	P	N	B	P	N	B	P	N			
Nominal capacity	cooling	kW	37.0			46.6			55.3					
Nominal input	cooling	kW	15.0		15.2	17.9		18.1	24.0		24.0			
EER			2.47		2.42	2.60		2.57	2.30		2.30			
Capacity steps			0~50~100			0~50~100			0~50~100					
Nominal pressure drop		kPa	22			22			22					
Refrigerant circuit	type		R-407C											
	charge	kg	2 x 4.6			2 x 5.9			2 x 6.0					
	control		Thermostatic expansion valve											
	oil type		FVC68D											
Compressor	oil charge	l	2 x 2.7			2 x 2.7			2 x 2.7					
	type		Hermetically sealed scroll compressor											
	no. of circuits/compressors		2/2			2/2			2/2					
Air heat exchanger			Cross fin coil / Hi-X tubes and PE coated waffle louvre fins											
Nominal static height unit		kPa	187		-	137		-	100		-			
Expansion tank		l	12		-	12		-	12		-			
Buffer tank		l	55	-		55	-		55	-				
Dimensions	HxWxD	mm	1,321x2,580x734						1,541x2,580x734					
Machine weight		kg	460	448	430	520	508	490	526	514	496			
Operation weight		kg	525	457	436	586	518	496	592	524	503			
Sound power level		dB(A)	79			81			81					
Casing	material		Polyester coated galvanised steel plate											
	colour		Ivory white / Munsell code 5Y7.5/1											
Piping connections			2"			2"			2"					
Safety & functional devices			High pressure switch / Low pressure switch / Discharge temperature control / Outlet water temperature protection / Compressor motor overcurrent / Pump motor overcurrent / Fan thermal protector / Anti-recycling and guard timer / Digital display controller with electronic temperature control / Reverse phase protector / Flow switch											
Operation range	air side	°C	-15°C ~ 43°C											
	water side	°C	5°C (-10°C as option) ~ 25°C											
Power supply		W1	3N~/400V/50Hz											

Heat Pump			EUWY*5KAZW			EUWY*8KAZW			EUWY*10KAZW			EUWY*12KAZW						
			B	P	N	B	P	N	B	P	N	B	P	N				
Nominal capacity	cooling	kW	9.1			17.1			21.0			25.0						
	heating	kW	11.9			18.5			24.0			27.0						
Nominal input	cooling	kW	3.78			7.46	7.45	8.57		8.57	11.4		11.4					
	heating	kW	4.59	4.59		7.10	7.10	9.10	9.10		10.8		10.8					
EER / COP			2.40/2.60		2.40/2.60		2.30/2.60		2.30/2.60		2.45/2.64		2.45/2.64		2.20/2.50		2.20/2.50	
Capacity steps			0~100			0~100			0~100			0~100						
Nominal pressure drop	cooling	kPa	10			25			24			33						
	heating	kPa	17			29			31			38						
Refrigerant circuit	type		R-407C															
	charge	kg	4.6			4.7			5.4			5.4						
	control		Thermostatic expansion valve															
	oil type		FVC68D															
	oil charge	l	1.5			2.7			2.7			2.7						
Compressor	type		Hermetically sealed scroll compressor															
	no. of circuits/compressors		1/1			1/1			1/1			1/1						
Air heat exchanger			Cross fin coil / Hi-X tubes and PE coated waffle louvre fins															
Nominal static height unit	cooling	kPa	223		-	171		-	151		-	118		-				
	heating	kPa	205		-	160		-	127		-	100		-				
Expansion tank	l	12		-	12		-	12		-	12		-					
Buffer tank	l	55	-		55	-		55	-		55	-						
Dimensions	HxWxD	mm	1,230x1,290x734						1,450x1,290x734									
Machine weight	kg	193	181	163	253	241	227	284	272	258	284	272	258					
Operation weight	kg	252	184	165	312	244	230	343	275	261	343	275	261					
Sound power	dB(A)	67			76			78			78							
Casing	material		Polyester coated galvanised steel plate															
	colour		Ivory white / Munsell code 5Y7.5/1															
Piping connections			1-1/4"			1-1/4"			1-1/4"			1-1/4"						
Safety & functional devices			High pressure switch / Low pressure switch / Discharge temperature control / Outlet water temperature protection / Compressor motor overcurrent / Pump motor overcurrent / Fan thermal protector / Anti-recycling and guard timer / Digital display controller with electronic temperature control / Reverse phase protector / Flowswitch															
Operation range	air side	°C	Cooling: -15°C ~ 43°C / Heating: -10°C ~ 21°C															
	water side	°C	Cooling: 5°C (-10°C as option) ~ 25°C / Heating: 35°C ~ 50°C															
Power supply			W1 3N~/400V/50Hz															

Heat Pump			EUWY*16KAZW			EUWY*20KAZW			EUWY*24KAZW					
			B	P	N	B	P	N	B	P	N			
Nominal capacity	cooling	kW	34.2			40.0			50.0					
	heating	kW	37.0			46.0			54.0					
Nominal input	cooling	kW	14.9			16.3			22.8					
	heating	kW	14.2			17.4			21.6					
EER / COP			2.30/2.61		2.30/2.61		2.45/2.64		2.45/2.64		2.20/2.50		2.20/2.50	
Capacity steps			0~50~100			0~50~100			0~50~100					
Nominal pressure drop	cooling	kPa	12			12			19					
	heating	kPa	14			16			22					
Refrigerant circuit	type		R-407C											
	charge	kg	10.2			10.8			11.2					
	control		Thermostatic expansion valve											
	oil type		FVC68D											
	oil charge	l	2 x 2.7			2 x 2.7			2 x 2.7					
Compressor	type		Hermetically sealed scroll compressor											
	no. of circuits/compressors		2/2			2/2			2/2					
Air heat exchanger			Cross fin coil / Hi-X tubes and PE coated waffle louvre fins											
Nominal static height unit	cooling	kPa	209		-	183		-	146		-			
	heating	kPa	195		-	147		-	111		-			
Expansion tank	l	12		-	12		-	12		-				
Buffer tank	l	55	-		55	-		55	-					
Dimensions	HxWxD	mm	1,321x2,580x734						1,541x2,580x734					
Machine weight	kg	485	473	455	546	534	516	546	534	516				
Operation weight	kg	550	482	461	612	544	522	612	544	522				
Sound power level	dB(A)	79			81			81						
Casing	material		Polyester coated galvanised steel plate											
	colour		Ivory white / Munsell code 5Y7.5/1											
Piping connections			2"			2"			2"					
Safety & functional devices			High pressure switch / Low pressure switch / Discharge temperature control / Outlet water temperature protection / Compressor motor overcurrent / Pump motor overcurrent / Fan thermal protector / Anti-recycling and guard timer / Digital display controller with electronic temperature control / Reverse phase protector / Flowswitch											
Operation range	air side	°C	Cooling: -15°C ~ 43°C / Heating: -10°C ~ 21°C											
	water side	°C	Cooling: 5°C (-10°C as option) ~ 25°C / Heating: 35°C ~ 50°C											
Power supply			W1 3N~/400V/50Hz											

Option Number	Option description	Unit size												Availability									
		5			8			10			12				16			20			24		
		B	P	N	B	P	N	B	P	N	B	P	N		B	P	N	B	P	N	B	P	N
Not combinable options																							
OPZH	LWE till -5°C	O			O			O			O			O			O			O			Factory mounted
OPZL	LWE till -10°C	O			O			O			O			O			O			O			Factory mounted
Completely combinable options																							
OPHF	Fan motor size up 50Pa	O			O			O			O			O			O			O			Factory mounted
OP10	Evaporator heater tape	O			O			O			O			O			O			O			Factory mounted
OPHP	Pump size up	O	-		O	-		O	-		O	-		O	-		O	-		O	-		Factory mounted
Available kits																							
EKGAU5/8KA	Gauges kit 5/8hp	O			O			-			-			-			-			-			Kit
EKGAU10/12KA	Gauges kit 10/12hp	-			-			O			O			-			-			-			Kit
EKGAU16KA	Gauges kit 16hp	-			-			-			-			O			-			-			Kit
EKGAU24KA	Gauges kit 20/24hp	-			-			-			-			-			O			O			Kit
EKSS	Soft starter kit	O			O			O			O			-			-			-			Kit
EKAC10B	Address card for BMS	O			O			O			O			O			O			O			Kit
EKBMSMBA	Gateway for MODBUS	O			O			O			O			O			O			O			Kit
EKBMSBNA	Gateway for BACNET	O			O			O			O			O			O			O			Kit
EKRUMC	Remote user interface	O			O			O			O			O			O			O			Kit
EKBT	Buffertank 200l	O			O			O			O			O			O			O			Kit

To install EKBMSMBA, EKBMBNA and EKRUMC > EKAC10B needs to be installed on the unit.

O : available

- : not available

MEASURING CONDITIONS

1. Nominal cooling capacities are based on: evaporator 12°C/7°C • ambient 35°C.
2. Nominal heating capacities are based on: ambient: 7°CDB/6°CWB; condenser: 40°C/45°C.
3. The sound power level is an absolute value indicating the "power" which a sound source generates.



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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