AIR-COOLED
INVERTER MINI-CHILLERS

APPLIED SYSTEMS R-410A

INVERTER

www.daikin.eu

COOLING ONLY
EWAQ005-011ACV3
EWAQ009-013ACW1

HEAT PUMP
EWYQ005-011ACV3
EWYQ009-013ACW1

With the extension of the Mini-chiller R-410A EWAQ/EWYQ range Daikin offers a complete product portfolio of inverter systems, suitable for use in residential and light commercial applications.

The full range is composed by 9 capacity sizes, from 5 up to 14kW, available in both cooling only and heat pump version.

Combined with the extensive range of Daikin fan coil units, the Mini-chiller Inverter provides a more comfortable environment while ensuring the highest levels of efficiency.

MAIN FEATURES

For end users:

- Thanks to inverter technology:
  - we reach an increased ESEER up to 4.7*
  - and reduce the starting currents significantly
- Sound pressure down to 42dB(A) in night quiet mode
- Wide operation range (ambient temperature in heating down to -15°C)
- Ensures maximum comfort

For installers:

- Wide range of outdoor units available in:
  - single and three phase power supply
  - both cooling only and heat pump version
- Built-in hydronic module
  - no buffer tank required
  - standard pump and main switch included
  - option high ESP pump (up to 90kPa)
- Plug and play approach

* The ESEER value (European Seasonal Energy Efficiency Ratio - calculated at Eurovent conditions) refers to the output of a unit in part load working conditions and different temperatures.

SAVING ENERGY CONSUMPTION

The application of inverter control on the compressor saves energy for different reasons:

› the starting current - each time the compressor is turned on - is lower compared to standard fixed speed models (no need for softstarter)

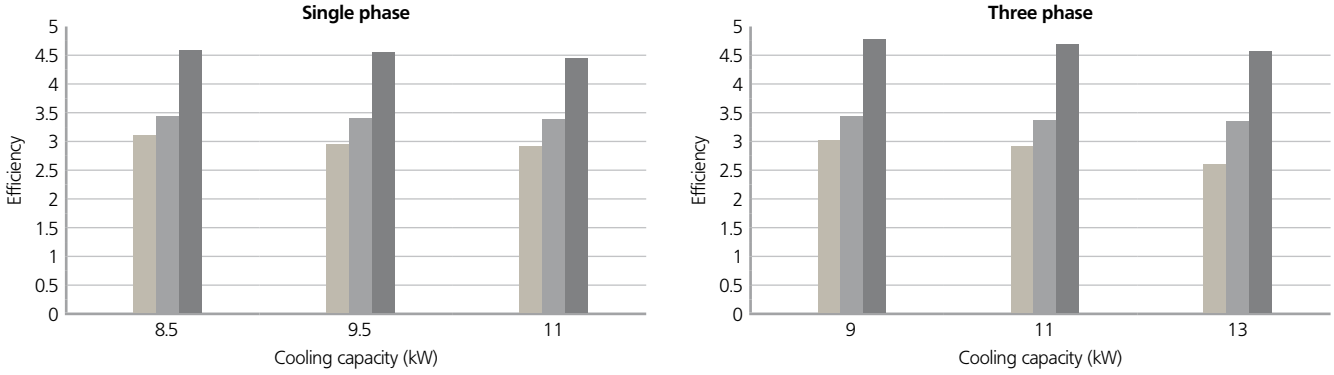
› by continuously managing its speed, it enables the compressor to consume only the power necessary to match the requested load

› it allows to regulate with maximum precision the compressor capacity, resulting in:

· higher energy efficiency in partial load conditions

· less frequent start/stop cycles

· reduction of life-cycle costs and increase of reliability



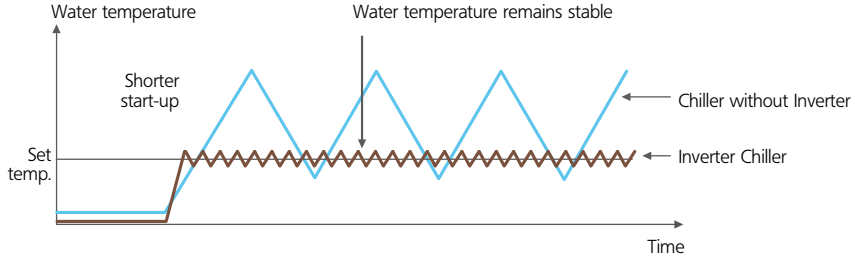
Measuring conditions: EER/ESEER/COP at Eurovent condition

CREATING THE HIGHEST COMFORT LEVELS

Inverter technology used in the EWA/YQ mini-chillers ensures the highest comfort levels:

· it reduces start-up time by one third, which allows to achieve much faster the needed temperature

· it continuously manages the capacity of the chiller keeping the water temperature as constant as possible



These are major improvements over standard non-inverter models, which utilise continuous ON/OFF switching of the compressor, creating longer start-up time and greater fluctuations in room temperatures.

FLEXIBLE APPLICATION & EASY INSTALLATION

The full R-410A mini-chiller range is composed by 9 capacity sizes, from 5 up to 14kW, available in both heat pump and cooling only version (single and three phase) and supported by an extensive range of Daikin fan coil units.

Residential applications: single phase power supply and low starting currents make the inverter heat pump ideal for residential applications. Furthermore, the unit is provided with a night quiet mode which reduces the potential noise disturbances in residential areas. For light commercial applications also three phase power supply models are now available.

The mini-chiller has a built-in hydraulic module and is also available with evaporator heater tape (OP10) and high ESP pump (OPHP). The unit is easy to install with "plug and play" operation.

SPECIFICATIONS

COOLING ONLY / HEAT PUMP				005	006	007
Capacity (Eurovent)	Cooling		kW	5.2	6.0	7.1
	▶ Heating		kW	5.65	6.35	7.75
Nominal input (Eurovent)	Cooling		kW	1.89	2.35	2.95
	▶ Heating		kW	1.97	2.24	2.83
EER				2.75	2.55	2.41
▶ COP (Eurovent)				2.87	2.83	2.74
Dimensions	Height x Width x Depth		mm	805x1,190x360		
Weight	Machine weight		kg	100		
	Operating Weight		kg	104		
Water Heat Exchanger	Type			Brased plate		
	Minimum water volume in the system		l	10		
	Water flow rate	Min	l/min	12		
	Nominal Water Flow	Cooling	l/min	14.9	17.2	20.4
		▶ Heating	l/min	17.5	19.5	23.5
Air heat exchanger	Type			Tube type		
External static pressure	Cooling		kPa	49.4	45.1	38.3
	Heating		kPa	44.5	40.3	30.7
Expansion vessel	Volume		l	6		
Compressor	Type			Inverter hermetically sealed swing compressor		
	Model	Quantity		1		
Sound Power		Cooling	dBA	62		63
Operation Range	Water side	Cooling	°C	5 ~ 20		
		▶ Heating	°C	25 ~ 50		
	Air side	Cooling	°CDB	10 ~ 43		
		▶ Heating	°CDB	-15 ~ 25		
Refrigerant circuit	Refrigerant type			R-410A		
	Refrigerant charge		kg	1.7		
	No of circuits			1		
	Refrigerant control			Electronic expansion valve		
Power Supply				1~/230V/50Hz		
Piping connections	Water heat exchanger inlet / outlet			1" mbsp		
	Water heat exchanger drain			hose nipple 1/2" fbsp		

▶ only applicable for EWYQ-ACV3

COOLING ONLY / HEAT PUMP				009ACV3	010ACV3	011ACV3	009ACW1	011ACW1	013ACW1
Capacity (Eurovent)	Cooling		kW	8.5	9.5	11.0	9.0	11.0	13.2
	▶ Heating		kW	10.0	11.5	13.0	11.0	12.5	14.0
Nominal input (Eurovent)	Cooling		kW	2.74	3.19	3.82	2.96	3.82	5.10
	▶ Heating		kW	2.91	3.38	3.86	3.23	3.70	4.19
EER				3.11	2.98	2.88	3.04	2.88	2.59
ESEER				4.57	4.52	4.46	4.68	4.63	4.52
▶ COP				3.44	3.40	3.37	3.41	3.38	3.34
Dimensions	Height x Width x Depth		mm	1,435 x 1,418 x 382					
Weight	Machine weight		kg	180					
	Operating weight		kg	-					
Water Heat Exchanger	Type			Brazed plate					
	Water volume		l	1.01					
	Minimum Water flow rate		l/min	16					
	Nominal Water Flow	Cooling	l/min	24.4	27.2	31.5	25.8	31.5	37.3
		▶ Heating	l/min	28.7	33.0	37.5	31.5	35.8	40.1
Air heat exchanger	Type			Hi-XSS					
External static pressure	Cooling		kPa	60.2	57.5	53.0	58.9	53.0	45.7
	Heating		kPa	55.2	50.0	41.8	51.9	44.2	36.7
Expansion vessel	Volume		l	10					
Compressor	Type			Inverter hermetically sealed scroll compressor					
	Model	Quantity		1					
Sound power	Cooling		dBa	64	64	64	64	64	66
	▶ Heating		dBa	64	64	64	64	64	64
Sound Pressure		Cooling Rated	dBa	51	51	51	51	51	52
		Cooling Night quiet	dBa	45	45	45	45	45	45
		▶ Heating Rated	dBa	51	51	51	51	51	51
		▶ Heating Night quiet	dBa	42	42	42	42	42	43
Operation Range	Water side	Cooling	°C	5 ~ 22					
		▶ Heating	°C	25 ~ 50					
	Air side	Cooling	°CDB	10 ~ 46					
		▶ Heating	°CDB	-15 ~35					
Refrigerant circuit	Refrigerant type			R-410A					
	Refrigerant charge		kg	2.95					
	No of circuits			1					
	Refrigerant control			Electronic expansion valve					
Power Supply				1 ~ / 50Hz / 230V			3N ~ / 50Hz / 400V		
Piping connections Ø			Inch	G 5/4"					
Piping			Inch	3					

Note:
▶ only applicable for EWYQ-ACV3 and EWYQ-ACW1
* grey cells contain preliminary data
All options are factory mounted

OPTIONS & ACCESSORIES

Reference	Products	Integrated Hydronics		Electrical
		Single pump	High ESP pump	Evaporator heater tape
		OPSP	OPHP	OP10
EWAQ-ACV3	005-006-007	STD	-	•
EWAQ-ACV3 (1)	009-010-011	STD	•	•
EWAQ-ACW1 (1)	009-011-013	STD	•	•
EWYQ-ACV3	005-006-007	STD	-	•
EWYQ-ACV3 (1)	009-010-011	STD	•	•
EWYQ-ACW1 (1)	009-011-013	STD	•	•

(1) EKRP1HB option kit available
OP-options are factory mounted.

In all of us, a green heart

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 EUROPE N.V.

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