

DZ Chiller Series

Centrifugal oil free water
cooled inverter chiller



Magnetic bearing technology
Industry leading part load efficiency
Application flexibility
Available with R134a or R1234ze



AHUs

CHILLERS

PROJECTS

SERVICE

Features

- › Magnetic Bearing Oil Free Centrifugal compressors
- › High efficiency flooded Heat Exchangers
- › Application flexibility, suitable for both Dry Cooler and Cooling Tower applications
- › App Ready for easy interface with remote smart device
- › Compact design through stacked heat exchangers
- › Heat pump version includes hot gas bypass
- › Sound Proof Cabinet option
- › Economiser availability on specific sizes
- › Rapid Restart option
- › Up to 3 compressors always in single circuit





A V A I L A B L E O N

R-1234ze(E) platform

R-1234ze(E)

R-134a platform

R-134a



Single compressor

From 320 kW up to 742 kW on
R-134a platform

From 227 kW up to 478 kW on
R-1234ze(E) platform

Dual compressor

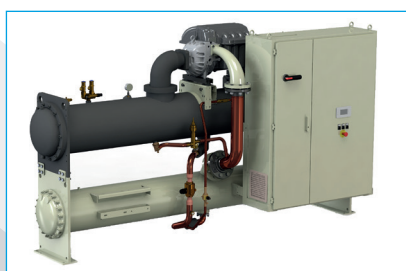
From 610 kW up to 1478 kW on
R-134a platform

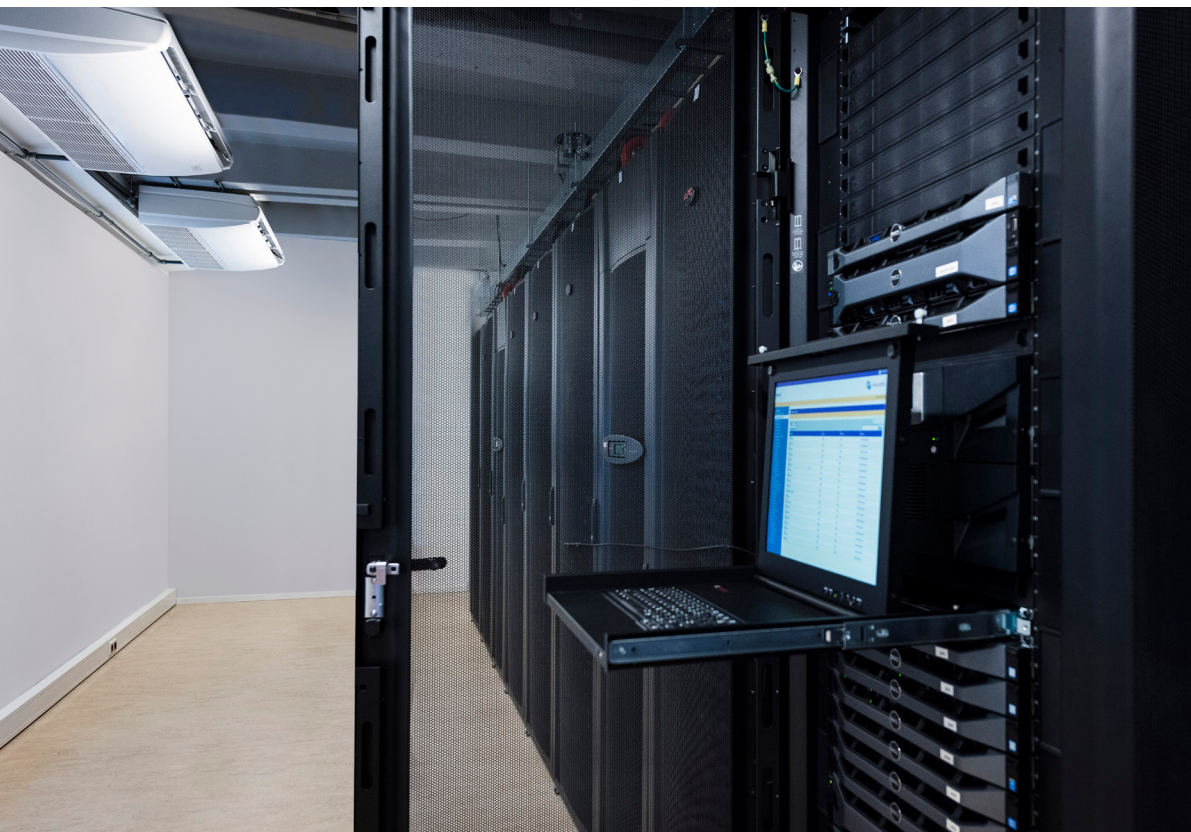
From 429 kW up to 945 on
R-1234ze(E) platform

Triple compressor

From 1038 kW up to 2173 kW on
R-134a platform

From 741 kW up to 1417 kW on
R-1234ze(E) platform



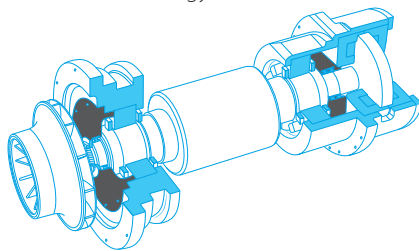


Why choose DZ chiller series?

The DZ chiller series incorporates a number of advanced technology features that are unique in the market.

Magnetic Bearing Technology

Fitted with centrifugal compressors utilising frictionless magnetic bearings for oil-free operation, integrated variable-frequency drives, and high-speed direct drive technology



Industry leading part load efficiency

The high efficiency compressor is matched with highly efficient heat exchangers to make an impressive chiller

Increased reliability

The frictionless magnetic bearing design needs no oil management system, resulting in increased reliability and reduced maintenance

Green building design

Developed to achieve maximum efficiency and is future-proofed to comply with existing design and regulatory standards as well as longer-term EU energy goals

Application flexibility

The DZ Series includes models suitable for both high condensing operation (Dry Cooler application) and low condensing operation (Cooling Tower applications)



Designed for compactness

Footprint reduced to the minimum levels thanks to a unique design with stacked heat exchangers.

Option flexibility



Wide range of options, such as the **Rapid Re-Start**, allowing the unit to restart after a power failure within 26 seconds following power restoration, an automatic transfer switch to backup generator.

Comprehensive solution for data centers applications.



Low noise solution with dedicated Compressor sound proof cabinet to ensure outstanding flexibility to match any specific application.



Hot Gas Bypass (HGBP).

The hot gas bypass (HGBP) reduces compressor cycling in order to stabilise the chilled water temperature at very low loads. The HGBP is a control capacity device that feeds the discharge gas directly into the evaporator in order to extend the minimum power range limit. This hot gas provides a stable refrigerant flow and keeps the chiller from short cycling under reduced load conditions combined with high lift. It also reduces surge potential on heat pump mode units.



Heat Pump Version.

The Heat Pump Version including Pursuit Mode and allow reversibility on the water side. Cooling or heating mode operation can be selected by means of a dedicated switch installed on the unit electrical panel. If communication card is selected, cooling or heating mode operation can be managed by BMS. It includes HGBP always and additional 20 mm insulation.

Connectivity

Enabled for operation via the Daikin on Site platform. The DZ can be monitored remotely, allowing the system to be accessed with one click for system optimisation and preventative maintenance.

Enabled for operation with an App specifically designed to operate on the unit by remote smart device (tablet, smartphone, PC). App enables easy-to-access data, and it allows an effective graphical representation of the main data and displays the unit operating parameters.



R-134a

Specification tables - EWWH-DZ R-1234ze(E) refrigerant  **R-1234ze(E)**

R-1234ze(E)

	MODEL	EWWH	230DZXSA1	245DZXEA1	320DZXSA1	345DZXEA1	380DZXSA1	405DZXEA1	430DZXSA2	455DZXSA2	460DZXSA1	470DZXEA2
COOLING PERFORMANCE	Capacity - Cooling	kW	227	242	318	339	376	402	429	455	461	469
	Unit power input - Cooling	kW	45,6	47,9	60,5	63,4	71,4	75,1	83,4	90,6	79,3	90,3
	EER		4,98	5,05	5,27	5,35	5,27	5,35	5,14	5,02	5,81	5,19
	SEER		8,46	8,48	8,84	8,95	8,84	8,94	8,74	8,74	8,58	8,81
	IPLV		9,61	9,64	9,79	9,88	9,83	9,94	9,71	9,68	9,62	9,74
DIMENSIONS	Height	mm	1865	1865	1865	1865	1865	1865	1985	1985	1985	1985
	Width	mm	1055	1055	1055	1055	1055	1055	1160	1160	1160	1160
	Length	mm	3625	3625	3625	3625	3625	3625	3625	3585	3625	3585
WEIGHT	Unit Weight	kg	1700	1750	1900	1950	2000	2050	2850	2850	2850	2850
	Operating Weight	kg	1973	2033	2216	2276	2347	2407	3197	3344	3197	3354
WATER HEAT EXCHANGER - EVAPORATOR	Type		Flooded Shell and Tube									
	Water Volume	l	70	70	96	96	107	107	107	134	107	134
	Water flow rate	l/s	10,8	11,6	15,2	16,2	18	19,2	20,5	21,7	22,4	23,1
	Water pressure drop	kPa	28,2	29,7	24,6	28,4	26,8	28,4	31,7	27,8	37,8	32
WATER HEAT EXCHANGER - CONDENSER	Type		Shell and Tube									
	Water Volume	l	83	83	100	100	120	120	120	170	120	170
	Water flow rate	l/s	13	13,9	18,1	19,2	21,4	22,8	24,5	26,1	26,7	27,7
	Water pressure drop	kPa	24	28	30	34	27	31	35	23	42	26
COMPRESSOR	Type		Centrifugal									
	Quantity	No.	1	1	1	1	1	1	2	2	2	2
SOUND LEVEL	Sound Power - Cooling	dB(A)	87,9	87,9	88,9	88,9	89,9	89,9	91,1	91	91,1	91
	Sound Pressure level@1m distance - Cooling	dB(A)	69,6	69,6	70,6	70,6	71,6	71,6	72,6	72,6	72,6	72,6
REFRIGERANT CIRCUIT	Refrigerant type / GWP		R-1234ze(E) / 7									
	N. of circuits	No.	1									
	Refrigerant charge	kg	120	130	120	130	120	130	120	180	120	200
PIPING CONNECTIONS	Evaporator water inlet/outlet	mm	139,7	139,7	139,7	139,7	139,7	139,7	139,7	168,3	139,7	168,3
	Condenser water inlet/outlet	mm	139,7	139,7	139,7	139,7	139,7	139,7	139,7	168,3	139,7	168,3
POWER SUPPLY	Phase / Frequency / Voltage		3~/50/400									

Daikin on Site

Standard on all new installations

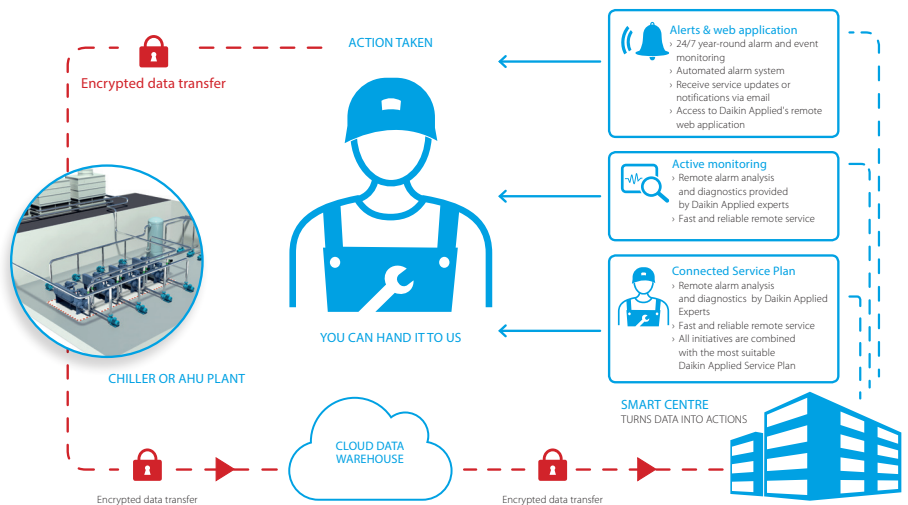
What is Daikin on Site?

Daikin on Site (DOS) is a web-based 24/7 remote monitoring system that collects complex operational data from the AHU or chiller control system.

Daikin's Smart Centre turns this data into useful information that allows the user to remotely monitor performance. It also allows Daikin professionals to remotely optimise and maintain the equipment.

Main benefits

- › Remote diagnostic support from Daikin experts
- › Enhanced reliability and reduced system downtime
- › Optimised energy efficiency and reduced operational costs over the systems lifetime
- › Insight into operational data to optimise the use of equipment via Trend Analysis



Service & Maintenance

Daikin Applied Service offers maintenance, repairs and support on ALL brands of HVAC systems and applied system solutions; covering air handling units, chillers, split air conditioning, VRV and heat pumps.

Service capabilities

- › Flexible maintenance contracts tailored to your business needs
- › Maintenance of ALL brands of HVAC equipment
- › 24/7 emergency call out service
- › Up to four hour response time
- › Qualified site service engineers (F-Gas Registered)
- › Remote monitoring with Daikin On Site (DOS)
- › On site training for front-line personnel
- › Tailored Service Level Agreement (SLA)
- › Full chiller running logs taken on every service visit
- › Comprehensive spare parts availability & support on all brands
- › Retrofitting & refurbishment

Benefits of a maintained system

- › Lower operation costs and energy usage
- › Extended life-cycle of assets
- › Fast and reliable remote diagnostics with Daikin On Site
- › Reduced equipment downtime and costly repairs
- › Improved indoor air quality



For Product, Service & Maintenance,
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