



DZ Chiller Series

Centrifugal Oil Free water cooled
inverter chiller



Magnetic bearing technology
Industry leading part load efficiency
Application flexibility



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
- › Economizer availability on specific sizes
- › Rapid Restart option
- › Up to 3 compressors always in single circuit

available on





DZ CHILLER SERIES

AVAILABLE ON

R-1234ze(E) platform

R-1234ze(E)

R-134a platform

R-134a

R-513A platform

R-513A

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

From 316 kW up to 729 kW on R-513A 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

From 609 kW up to 1451 kW on R-513A 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

From 1025 kW up to 2129 kW on R-513A platform



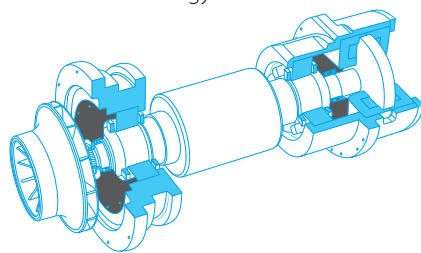


Why choose DZ chiller series?

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

Magnetic Bearing Technology

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



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

Industry leading part load efficiency

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

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 stabilize 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 optimization and preventative maintenance.

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



Specification tables - EWWD-DZ R-134a refrigerant

R-134a

	MODEL	EWWD	320DZXSA1	340DZXEA1	440DZXSA1	470DZXEA1	530DZXSA1	570DZXEA1	610DZXSA2	640DZXSA2	670DZXEA2	680DZXEA2
COOLING PERFORMANCE	Capacity - Cooling	kW	320	341	443	474	528	566	610	638	670	682
	Unit power input - Cooling	kW	66,5	69,9	88,5	93,5	102	108	124,7	131	138,4	138
	EER		4,81	4,88	5	5,07	5,14	5,22	4,89	4,85	4,84	4,91
	SEER		8,56	8,57	8,05	8,09	8,29	8,34	8,81	8,92	8,82	8,93
	IPLV		9,68	9,57	9,67	9,62	10	10	9,66	9,78	9,61	9,63
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	15,3	16,4	21,2	22,7	25,3	27,1	29,1	30,5	32	32,7
	Water pressure drop	kPa	47,4	54,2	40,6	46,5	45	51,5	59,1	51	71,4	58,3
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	18,3	19,6	25,3	27	30,1	32,1	35,1	36,7	38,6	39,1
	Water pressure drop	kPa	49,2	56,4	59,5	68,4	54,5	62,4	74	46,2	90	52,9
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-134a / 1430									
	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									

Evaporator 12/7°C; Condenser 30/35°C
 Performances according to CSS software 10.27

700DZXSA1	740DZXE1	880DZXSA2	950DZXE2	C10DZXSA2	C10DZXE3	C11DZXE2	C13DZXSA3	C14DZXSA2	C14DZXE3	C15DZXE2	C15DZXSA3	C17DZXE3	C21DZXSA3	C22DZXE3
700	742	883	946	1056	1038	1130	1325	1402	1437	1478	1565	1685	2070	2173
126	131	176	186	205	210	216	272	256	288	263	311	329	391	393
5,53	5,65	5,01	5,08	5,15	4,94	5,23	4,88	5,46	4,98	5,6	5,04	5,12	5,3	5,53
8,75	8,86	8,95	9	9,27	8,57	9,32	8,82	9,26	8,84	9,35	9,09	9,05	9,21	9,33
10,1	10,2	9,86	9,79	10,2	9,58	10,1	9,56	10,5	9,55	10,4	9,91	9,86	9,93	10,00
1985	1985	1985	1985	2200	2082	2200	2083	2200	2083	2200	2225	2225	2290	2290
1160	1160	1160	1160	1270	1510	1270	1510	1270	1510	1270	1510	1510	1510	1510
3585	3585	3585	3585	3580	4688	3580	4793	3580	4793	3580	4768	4768	4812	4812
2600	2650	2900	3000	3600	4400	3700	4350	3800	4700	3900	4750	5100	5550	5900
3102	3162	3458	3568	4292	4970	4412	5020	4579	5370	4699	5540	5890	6570	6920
Flooded Shell and Tube														
134	134	156	156	199	207,3	199	271,8	229	271,8	229	317,4	317,4	444,3	444,3
33,5	35,6	42,3	45,3	50,6	49,1	54,1	63,4	67,2	68	70,9	74,9	80,4	99,1	103
61,3	68,7	64	73,2	60,4	61,4	68,9	60,1	74	70,7	82	61,1	70,7	71,9	78,9
Shell and Tube														
188	188	211	211	263	326,4	263	359,9	320	359,9	320	442,6	442,6	603,6	603,6
39,4	41,6	50,5	53,9	60,1	58,9	64,1	76,1	79,1	81,4	83	89,5	95,8	117	121
41,6	46,7	50,9	58,3	50,3	44	57,6	56	52,9	66	58,5	43	50	57	62
Centrifugal														
1	1	2	2	2	3	2	3	2	3	2	3	3	3	3
91,1	91,1	92	92	93,3	98	93,3	99	94,3	99	94,3	100	100	101	101
72,6	72,6	73,6	73,6	74,6	79	74,6	80	75,6	80	75,6	81	81	82	82
R-134a / 1430														
1														
180	190	180	200	230	350	250	320	230	400	250	340	420	390	470
168,3	168,3	168,3	168,3	219,1	168,3	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1
168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3	219,1	168,3	219,1	219,1	219,1	219,1	219,1
3~/50/400														

	MODEL	EWWH	230DZXSA1	245DZXEA1	320DZXSA1	345DZXEA1	380DZXSA1	405DZXEA1	430DZXSA2	455DZXSA2	460DZXSA1	470DZXEA2
COOLING PERFORMANCE	Capacity - Cooling	kW	227	242	318	339	376	402	455	455	461	487
	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	4,88	5,02	5,81	4,93
	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	9,73	9,62
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									

Evaporator 12/7°C; Condenser 30/35°C
 Performances according to CSS software 10.27

480DZXE1	490DZXE2	640DZXA2	685DZXE2	740DZXE3	755DZXA2	810DZXE2	920DZXA2	950DZXA3	955DZXE2	C10DZXE3	C11DZXA3	C12DZXE3	C13DZXA3	C14DZXA3
474	484	637	679	741	752	803	918	946	945	1033	1126	1226	1352	1417
79,5	95,1	120,5	126,3	144,6	142,1	149,4	158,8	181	159,2	192,9	216,5	229,5	237,7	238,3
5,97	5,09	5,29	5,37	5,13	5,29	5,37	5,78	5,22	5,93	5,35	5,2	5,34	5,69	5,94
8,67	8,83	8,99	9,11	8,69	9,04	9,16	9,03	9,08	9,1	9,18	9,06	9,18	9,18	9,37
9,87	9,74	9,99	10,07	9,66	10,05	10,14	9,99	9,83	10,13	9,92	9,91	9,98	9,98	9,94
1985	1985	1985	1985	2082	2200	2200	2200	2083	2200	2083	2225	2225	2290	2290
1160	1160	1160	1160	1510	1270	1270	1270	1510	1270	1510	1510	1510	1510	1510
3585	3585	3585	3585	4688	3580	3580	3580	4793	3580	4793	4768	4768	4812	4812
2600	2650	2900	3000	4400	3600	3700	3800	4350	3900	4700	4750	5100	5550	5900
3102	3162	3458	3568	4970	4292	4412	4579	5020	4699	5370	5540	5890	6570	6920
Flooded Shell and Tube														
134	134	156	156	207,3	199	199	229	271,8	229	271,8	317,4	317,4	444,3	444,3
22	22,6	30,4	32,4	34,9	35,9	38,4	43,9	45,2	45,2	48,7	53,8	57,9	64,6	67
28,6	30,8	35,9	41,3	31	33	38,1	34,3	30	36,9	37	31	38	31	33
Shell and Tube														
188	188	211	211	326,4	263	263	320	359,9	320	359,9	442,6	442,6	603,6	603,6
25,8	26,4	36,2	38,5	41,8	42,7	45,5	51,4	53,8	52,8	57,8	64,2	68,8	76	78,4
17	18	25	29	21	25	28	22	27	23	33	26	30	24	26
Centrifugal														
1	1	2	2	3	2	2	2	3	2	3	3	3	3	3
91,1	91,1	92	92	98	93,3	93,3	94,3	99	94,3	99	100	100	101	101
72,6	72,6	73,6	73,6	79	74,6	74,6	75,6	80	75,6	80	81	81	82	82
R-1234ze(E) / 7														
1														
180	190	180	200	350	230	250	230	320	250	400	340	420	390	470
168,3	168,3	168,3	168,3	168,3	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1
168,3	168,3	168,3	168,3	168,3	168,3	168,3	219,1	168,3	219,1	168,3	219,1	219,1	219,1	219,1
3~/50/400														

Specification tables - EWWS-DZ R-513A refrigerant



	MODEL	EWWS	320DZXSA1 DC	340DZXEA1 DC	440DZXSA1 DC	470DZXEA1 DC	530DZXSA1 CT	570DZXEA1 CT	610DZXSA2 DC	640DZXSA2 DC	670DZXEA2 DC	680DZXEA2
COOLING PERFORMANCE	Capacity - Cooling	kW	316	337	439	471	520	558	609	631	671	674
	Unit power input - Cooling	kW	67,1	70,2	90	95,1	103	108	126	132	139	139
	EER		4,71	4,8	4,88	4,96	5,05	5,15	4,82	4,77	4,8	4,85
	SEER		8,74	8,77	8,64	8,69	9,05	9,12	8,82	8,97	8,83	9
	IPLV		9,31	9,22	9,25	9,2	9,61	9,59	9,29	9,44	9,11	9,31
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	15,3	16,3	21,3	22,9	25,2	27	29,1	30,6	32	32,7
	Water pressure drop	kPa	47,3	54,1	40,9	47,2	44,8	51,3	59,1	51,1	71,4	58,3
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	18,4	19,6	25,4	27,3	30,1	32,1	34,9	36,8	38,4	39,2
	Water pressure drop	kPa	49,4	56,5	60,4	69,8	54,5	62,4	74,2	46,5	90,8	53,2
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		R513A									
	N. of circuits	No.	1									
	Refrigerant charge	kg	120	160	150	130	120	130	140	190	200	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									

Evaporator 12/7°C; Condenser 30/35°C
 Performances according to CSS software 10.29

700DZXSA1 CT	740DZXEA1 CT	880DZXSA2 DC	950DZXEA2 DC	C10DZXEA3 DC	C10DZXSA2 CT	C11DZXEA2 CT	C13DZXSA3 DC	C14DZXEA3 DC	C14DZXSA2 CT	C15DZXEA2 CT	C15DZXSA3 CT	C17DZXEA3 CT	C21DZXSA3 CT	C22DZXEA3 CT
694	729	876	942	1025	1043	1117	1305	1420	1390	1451	1550	1653	2027	2129
127	129	177	188	209	205	215	270	287	257	259	312	324	384	385
5,44	5,61	4,92	5,01	4,89	5,08	5,18	4,82	4,94	5,4	5,6	4,96	5,1	5,27	5,52
8,77	8,86	8,97	9,03	8,81	9,29	9,36	8,82	8,86	9,26	9,37	9,08	9,09	9,22	9,34
9,77	9,78	9,45	9,38	9,25	9,83	9,81	9,1	9,12	9,96	9,98	9,38	9,4	9,34	9,41
1985	1985	1985	1985	2082	2200	2200	2083	2083	2200	2200	2225	2225	2290	2290
1160	1160	1160	1160	1510	1270	1270	1510	1510	1270	1270	1510	1510	1510	1510
3585	3585	3585	3585	4688	3580	3580	4793	4793	3580	3580	4768	4768	4812	4812
2600	2650	2900	3000	4400	3600	3700	4350	4700	3800	3900	4750	5100	5500	5900
3102	3162	3458	3568	4970	4292	4412	5020	5370	4579	4699	5540	5890	6570	6920
Flooded Shell and Tube														
134	134	156	156	207	199	199	272	272	229	229	317	317	444	444
33,7	35,3	42,5	45,6	49,6	50,5	54,1	63,1	68,8	67,4	70,3	75	80,1	98,1	102
61,7	67,8	64,5	74,1	61,2	59,3	67,7	59,5	70,6	74,4	80,8	61,3	69,7	70,4	77,4
Shell and Tube														
188	188	211	211	326	263	263	360	360	320	320	443	443	604	604
39,6	41,4	50,8	54,4	59,5	60,2	64,2	75,9	82,3	79,5	82,5	89,9	95,5	116	121
42,1	46,1	51,5	59,4	43,6	50,4	57,7	56,1	66,4	53,4	57,7	43,7	49,5	55,7	60,7
Centrifugal														
1	1	2	2	3	2	2	3	3	2	2	3	3	3	3
91,1	91,1	92	92	92,6	93,3	93,3	93,5	93,5	94,3	94,3	94,8	94,8	95,8	95,8
72,6	72,6	73,6	73,6	73	74,6	74,6	73,9	73,9	75,6	75,6	75,2	75,2	76,2	76,2
R513A														
1														
180	190	200	200	270	230	250	240	270	230	250	270	300	270	355
168,3	168,3	168,3	168,3	168,3	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1	219,1
168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3	219,1	219,1	219,1	219,1	219,1	219,1
3~/50/400														



Single compressor



Dual compressor



Triple compressor

Daikin Europe N.V. Naamloze Vennootschap Zandvoordestraat 300 · 8400 Oostende · Belgium · www.daikin.eu · BE 0412 120 336 · RPR Oostende (Publisher)



Daikin Europe N.V. participates in the Eurovent Certified Performance programme for Liquid Chilling Packages and Hydronic Heat Pumps, Fan Coil Units and Variable Refrigerant Flow systems. Check ongoing validity of certificate: www.eurovent-certification.com

ECPEN21-419

04/21



The present publication is drawn up by way of information only and does not constitute an offer binding upon Daikin Europe N.V. Daikin Europe N.V. has compiled the content of this publication to the best of its knowledge. No express or implied warranty is given for the completeness, accuracy, reliability or fitness for particular purpose of its content and the products and services presented therein. Specifications are subject to change without prior notice. Daikin Europe N.V. explicitly rejects any liability for any direct or indirect damage, in the broadest sense, arising from or related to the use and/or interpretation of this publication. All content is copyrighted by Daikin Europe N.V.

Printed on non-chlorinated paper.