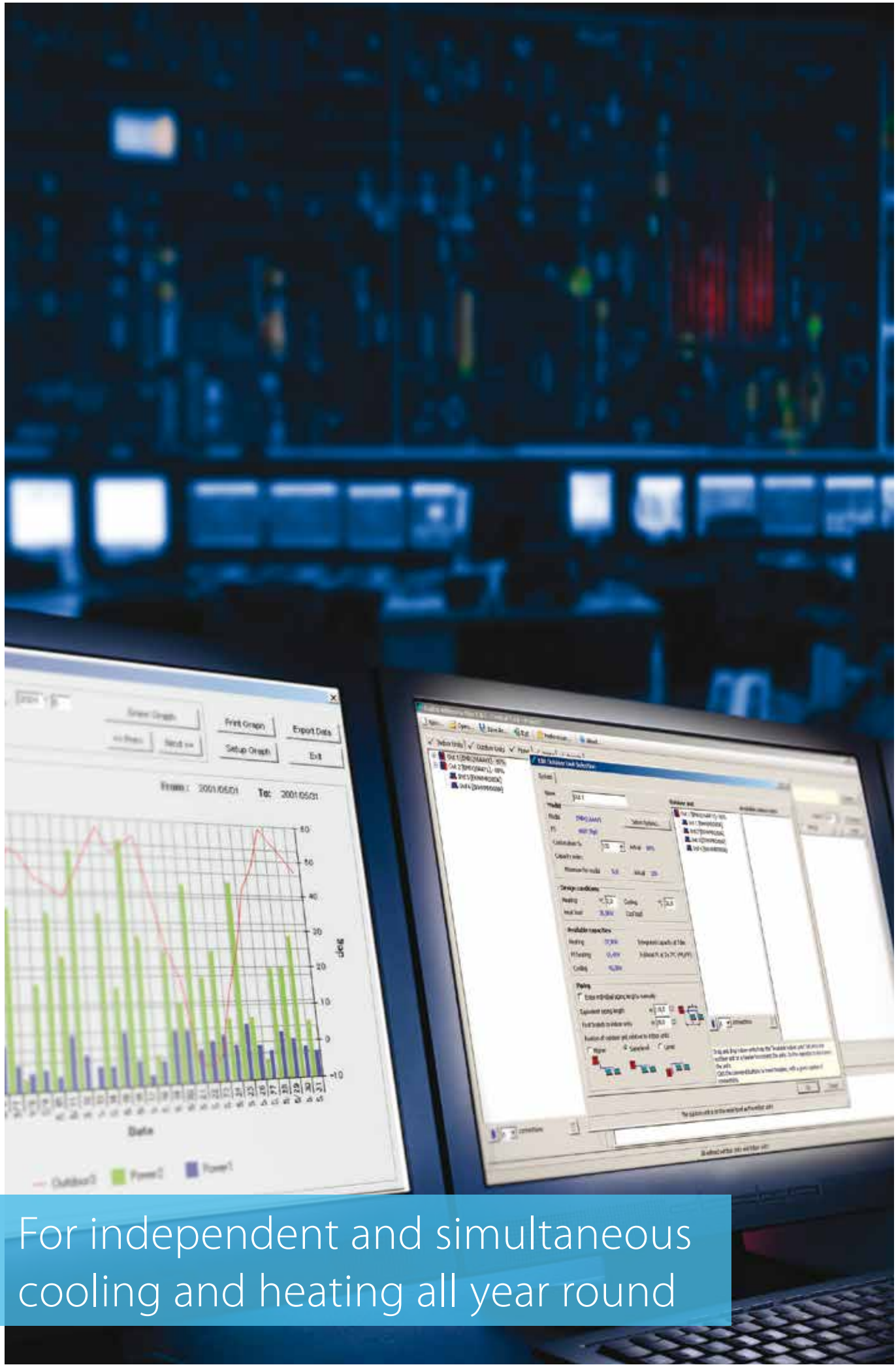
EWYD-4Z

Air to water
Multipurpose unit

4-pipe system solution with full inverter technology



For independent and simultaneous cooling and heating all year round

Why choose

4Z multipurpose series?

1 Top class efficiency

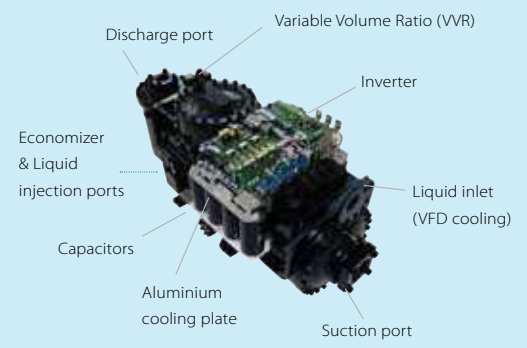
Total Energy Ratio up to 8.8

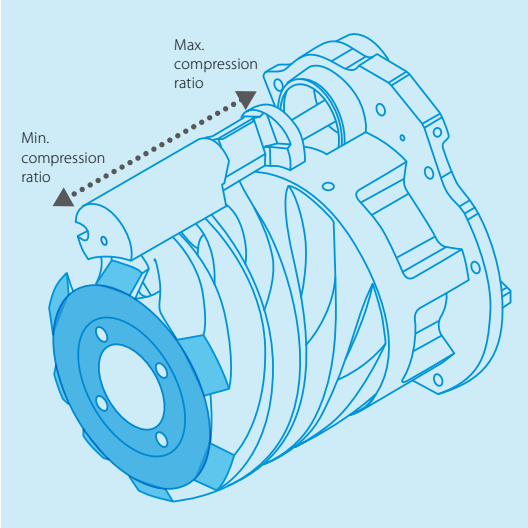
Full inverter technology: the best choice for every application

Daikin single screw compressor with integrated inverter and Variable Volume Ratio Technology

The inverter integrated in the compressor is refrigerant cooled:

- Safe and robust cooling system, totally independent from outdoor ambient conditions and air quality
- Suitable even for aggressive installation such as industrial or desert application





VVR (Variable Volume Ratio)

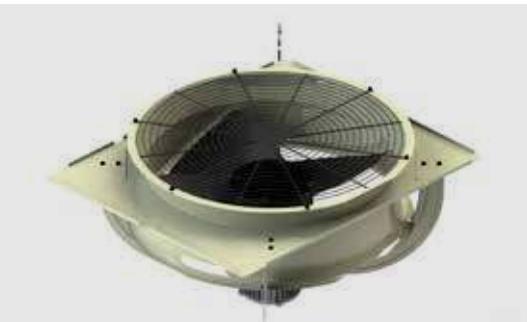
The operating conditions of a chiller are subjected to sensible changes due to the variation of ambient temperature and load request from the plant.

Screw compressors increase the pressure of the refrigerant by forcing it into a progressive smaller volume, from the suction to the discharge port. Once that the geometry of the compressor is defined the volume ratio is also defined.

Daikin compressors can modify their own geometry thanks to variable volume ratio (VVR).
The volume ratio will change by moving the sliding valves. VVR changes the point at which the gas leaves the compressor, and therefore changes the pressures at discharge which will be optimal at any condition.

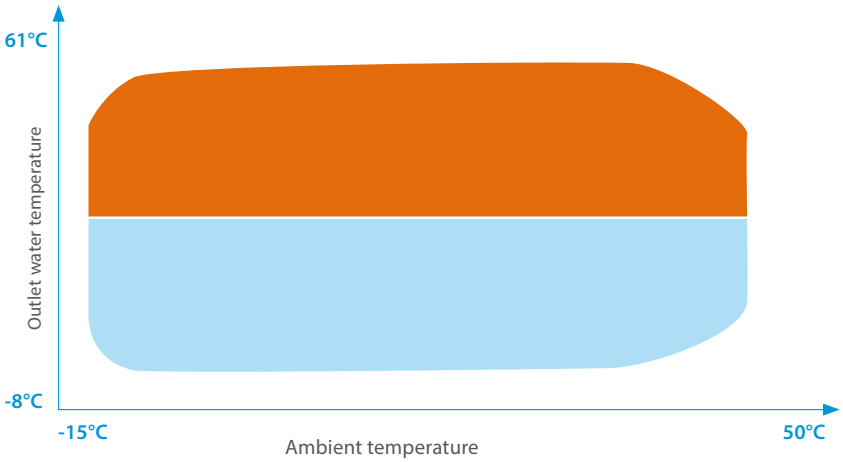
New Daikin High Efficiency Inverter fans

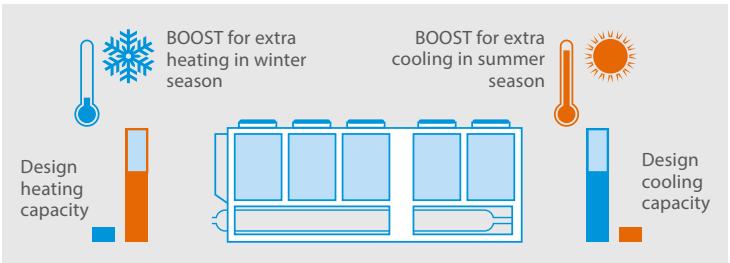
The new high efficiency fan developed by DAIKIN with optimized geometry ensures the best ratio between airflow and power input. The inverter control ensures the optimum airflow in every condition



2 Application flexibility

Wide operating envelope for cooling and heating





Extra capacity in Boosted operation

Thanks to the variable speed drive of the compressor is possible to benefit of an "extra" capacity during the coldest days in winter or the hottest days in summer

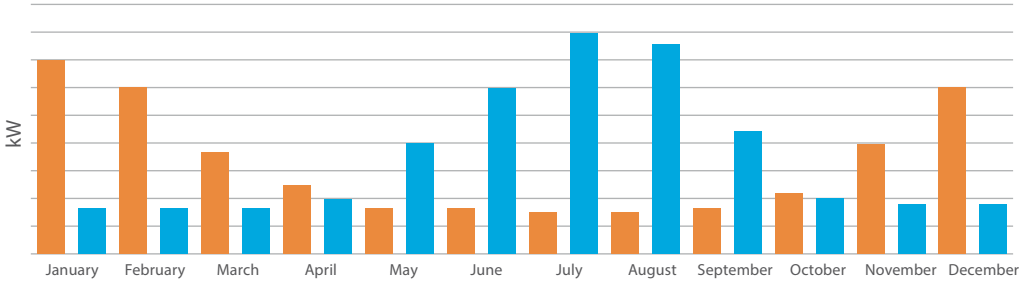
Rapid Restart functionality

In case of power failure DAIKIN 4Z is able to restart in less than 30 sec. The UPS installed in electrical box keeps the unit controller always powered. Is also possible to give, if needed, priority to restore the cooling or the heating load

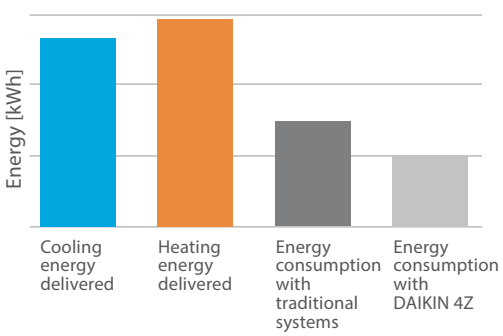
3 Best solution for simultaneous cooling and heating

☑ Big multipurpose buildings, hotels, hospital are just a few examples of application for multipurpose units

Load profile with simultaneous request for cooling and heating



☑ Lower energy consumption compared to traditional systems



Same Cooling and Heating energy delivered with
-30% energy consumption

Technical details - EWYD-4ZA

Air to Water mode																
Cooling only		**EWYD-4ZXSA2**		**400**	**450**	**500**	**550**	**600**	**650**	**700**	**800**	**900**	**C10**	**C11**	**C12**	**C13**	**C14**
Cooling capacity	Nom.	Gross Value	kW	403	453	504	552	604	655	705	804	903	1003	1103	1207	1307	1429
EER		Gross Value		3,19	3,28	3,27	3,28	3,27	3,23	3,41	3,39	3,32	3,30	3,35	3,31	3,34	3,20
Cooling capacity	Nom.	Net Value	kW	402	452	503	551	602	654	703	802	901	1001	1101	1204	1303	1423
EER		Net Value		3,17	3,25	3,25	3,25	3,24	3,19	3,37	3,36	3,28	3,27	3,32	3,28	3,29	3,15
Air to Water mode																
Heating only		**EWYD-4ZXSA2**		**400**	**450**	**500**	**550**	**600**	**650**	**700**	**800**	**900**	**C10**	**C11**	**C12**	**C13**	**C14**
Heating capacity	Nom.	Gross Value	kW	402	453	502	549	599	653	701	800	899	1001	1099	1199	1307	1423
COP		Gross Value		3,34	3,53	3,47	3,49	3,47	3,40	3,58	3,57	3,58	3,55	3,64	3,59	3,46	3,48
Heating capacity	Nom.	Net Value	kW	403	453	504	551	601	655	702	803	902	1003	1102	1202	1312	1429
COP		Net Value		3,33	3,52	3,45	3,47	3,45	3,38	3,55	3,54	3,55	3,53	3,62	3,56	3,43	3,45
Water to Water mode																
Heating + Cooling		**EWYD-4ZXSA2**		**400**	**450**	**500**	**550**	**600**	**650**	**700**	**800**	**900**	**C10**	**C11**	**C12**	**C13**	**C14**
Cooling capacity	Nom.	Gross Value	kW	314	356	395	432	476	513	551	632	708	794	869	950	1028	1120
Heating capacity	Nom.	Gross Value	kW	402	454	502	548	602	651	702	801	895	997	1095	1202	1299	1421
TER		Gross Value		8,14	8,32	8,35	8,43	8,57	8,44	8,30	8,47	8,57	8,82	8,72	8,55	8,59	8,44
Cooling capacity	Nom.	Net Value	kW	313	356	394	430	475	511	549	630	705	792	867	947	1023	1114
Heating capacity	Nom.	Net Value	kW	402	455	503	549	603	653	704	803	898	999	1097	1205	1303	1426
TER		Net Value		8,03	8,19	8,19	8,24	8,38	8,23	8,10	8,26	8,34	8,65	8,52	8,33	8,31	8,13
Dimensions Unit	Height		mm	2455													
	Width		mm	2240													
	Depth		mm	5775	5775	6675	6675	7575	8475	8475	8475	9425	10375	11325	12275	13225	14175
Cold Water heat exchanger	Type			Single pass shell & tube													
	Water flow rate Cooling	Nom.	l/s	19,2	21,6	24,0	26,3	28,8	31,3	33,6	38,3	43,1	47,8	52,6	57,6	62,4	68,2
	Water pressure drop Cooling	Nom.	kPa	13,7	16,9	20,5	31,4	28,0	32,7	33,9	31,5	38,9	26,4	31,3	36,4	51,9	62,5
	Water volume		l	149	149	262	240	298	298	307	280	280	481	481	481	451	451
Hot Water heat exchanger	Type			Single pass shell & tube													
	Water flow rate Heating	Nom.	l/s	19,4	21,9	24,3	26,6	29,0	31,6	33,9	38,7	43,5	48,4	53,2	58,0	63,2	68,8
	Water pressure drop Heating	Nom.	kPa	13,0	16,1	23,9	27,6	30,0	35,3	32,8	42,5	37,4	23,4	34,4	40,2	48,7	55,8
	Water volume		l	149	149	240	240	280	280	298	298	280	481	451	451	451	451
Air heat exchanger	Type			Fins & tubes													
Compressor	Type			Inverter driven single screw compressor													
	Quantity			2													
Fan	Type			Direct propeller, Inverter driven													
	Quantity			10	10	12	12	14	16	16	16	18	20	22	24	26	30
Sound power level	Cooling	Nom.	dBA	99	98	99	99	100	100	102	102	102	103	103	103	103	104
Sound pressure level @ 1 m	Cooling	Nom.	dBA	78	77	77	78	78	79	80	80	80	80	80	80	80	81
Operation range	Air side Cooling	Min.~Max.	°CDB	-18°C / +50°C													
	Water side Cooling	Min.~Max.	°CDB	-8°C / +20°C													
	Air side Heating	Min.~Max.	°CDB	-15°C / +50°C													
	Water side Heating	Min.~Max.	°CDB	+30°C / +61°C													
Refrigerant	Type / GWP			R134a / 1430													
	Circuits Quantity			2													
Power supply	Phase/Frequency/Voltage		Hz/V	3~/50/400 ~ 3/60/380													

Notes:
Performances are based on the following conditions:
Air to water, Cooling only: Cold Water Heat Exchanger 12/7°C; ambient 35°C. unit at full load operation; operating fluid: water
Air to water, Heating only: Hot Water Heat Exchanger 40/45°C; ambient 7°C; unit at full load operation; operating fluid water
Water to water, Cooling + Heating: Cold water Heat Exchanger */7°C; Hot Water Heat Exchanger */45°C; operating fluid water
Sound levels refer to the unit in Cooling only mode in nominal conditions
Data are subject to change without any notice

Technical details - EWYD-4ZA

Air to Water mode																
Cooling only		**EWYD-4ZXLA2**		**400**	**450**	**500**	**550**	**600**	**650**	**700**	**800**	**900**	**C10**	**C11**	**C12**	**C13**	**C14**
Cooling capacity	Nom.	Gross Value	kW	399	449	500	548	599	650	697	794	892	991	1091	1192	1291	1411
EER		Gross Value		3,30	3,35	3,38	3,35	3,36	3,34	3,51	3,44	3,35	3,33	3,41	3,37	3,40	3,26
Cooling capacity	Nom.	Net Value	kW	398	448	499	546	598	649	696	792	890	989	1088	1189	1287	1405
EER		Net Value		3,28	3,33	3,35	3,32	3,33	3,30	3,47	3,40	3,31	3,30	3,37	3,33	3,35	3,21
Air to Water mode																
Heating only		**EWYD-4ZXLA2**		**400**	**450**	**500**	**550**	**600**	**650**	**700**	**800**	**900**	**C10**	**C11**	**C12**	**C13**	**C14**
Heating capacity	Nom.	Gross Value	kW	398	448	498	544	594	647	694	795	895	994	1087	1186	1296	1415
COP		Gross Value		3,61	3,80	3,75	3,75	3,75	3,68	3,87	3,88	3,91	3,77	3,85	3,84	3,69	3,78
Heating capacity	Nom.	Net Value	kW	398	449	499	545	595	649	696	798	897	996	1090	1189	1301	1420
COP		Net Value		3,59	3,78	3,73	3,73	3,72	3,66	3,84	3,85	3,88	3,75	3,83	3,81	3,66	3,74
Water to Water mode																
Heating + Cooling		**EWYD-4ZXLA2**		**400**	**450**	**500**	**550**	**600**	**650**	**700**	**800**	**900**	**C10**	**C11**	**C12**	**C13**	**C14**
Cooling capacity	Nom.	Gross Value	kW	314	357	395	432	476	513	551	632	709	795	870	951	1028	1120
Heating capacity	Nom.	Gross Value	kW	402	454	502	548	602	651	702	801	896	998	1095	1202	1299	1421
TER		Gross Value		8,15	8,32	8,35	8,44	8,58	8,45	8,31	8,48	8,57	8,82	8,73	8,55	8,59	8,44
Cooling capacity	Nom.	Net Value	kW	313	356	394	431	475	512	549	630	706	793	867	947	1024	1115
Heating capacity	Nom.	Net Value	kW	403	455	503	550	604	653	704	804	898	1000	1098	1206	1303	1427
TER		Net Value		8,04	8,20	8,20	8,25	8,39	8,24	8,11	8,26	8,35	8,66	8,53	8,34	8,32	8,15
Dimensions Unit	Height		mm	2455													
	Width		mm	2240													
	Depth		mm	5775	5775	6675	6675	7575	8475	8475	8475	9425	10375	11325	12275	13225	14175
Cold Water heat exchanger	Type			Single pass shell & tube													
	Water flow rate Cooling	Nom.	l/s	19,0	21,4	23,9	26,1	28,6	31,0	33,3	37,9	42,6	47,3	52,0	56,9	61,6	67,3
	Water pressure drop Cooling	Nom.	kPa	13,5	16,7	20,2	30,9	27,6	32,3	33,2	30,8	38,0	25,8	30,7	35,6	50,8	61,1
	Water volume		l	149	149	262	240	298	298	307	280	280	481	481	481	451	451
Hot Water heat exchanger	Type			Single pass shell & tube													
	Water flow rate Heating	Nom.	l/s	19,2	21,7	24,1	26,3	28,7	31,3	33,6	38,5	43,3	48,1	52,6	57,4	62,7	68,4
	Water pressure drop Heating	Nom.	kPa	12,8	15,8	23,5	27,1	29,5	34,7	32,3	41,9	37,1	23,2	33,8	39,5	48,0	55,2
	Water volume		l	149	149	240	240	280	280	298	298	280	481	451	451	451	451
Air heat exchanger	Type			Fins & tubes													
Compressor	Type			Inverter driven single screw compressor													
	Quantity			2													
Fan	Type			Direct propeller, Inverter driven													
	Quantity			10	10	12	12	14	16	16	16	18	20	22	24	26	30
Sound power level	Cooling	Nom.	dBA	93	92	93	93	94	94	96	96	97	97	97	97	98	98
Sound pressure level @ 1 m	Cooling	Nom.	dBA	72	71	72	72	72	73	74	75	75	75	75	75	75	75
Operation range	Air side Cooling	Min.~Max.	°CDB	-18°C / +50°C													
	Water side Cooling	Min.~Max.	°CDB	-8°C / +20°C													
	Air side Heating	Min.~Max.	°CDB	-15°C / +50°C													
	Water side Heating	Min.~Max.	°CDB	+30°C / +61°C													
Refrigerant	Type / GWP			R134a / 1430													
	Circuits Quantity			2													
Power supply	Phase/Frequency/Voltage		Hz/V	3~/50/400 ~ 3/60/380													

Notes:
Performances are based on the following conditions:
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Air to water, Heating only: Hot Water Heat Exchanger 40/45°C; ambient 7°C; unit at full load operation; operating fluid water
Water to water, Cooling + Heating: Cold water Heat Exchanger */7°C; Hot Water Heat Exchanger */45°C; operating fluid water
Sound levels refer to the unit in Cooling only mode in nominal conditions
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