Technical Bulletin
BT16N008GB-02

ELFOSpace WALL3

Water terminal unit for indoor installation, wall-mounted

CFW 007.0 ÷ 021.0 RANGE

- DC Brushless Motor
- High standards of efficiency and low noise
- New design
- Electronic version with infrared remote control
- New wall remote control (optional accessory)
- Unit standard supplied with 3-way valve built-in
- Easy installation and maintenance

Nominal cooling capacity from 2,20 to 4,45 kW
Nominal heating capacity from 2,57 to 5,38 kW

Terminal unit Clivet

The hydronic terminal units are very diffused for their versatility and reliability. The Clivet range includes many versions that simplify the application in differents type of installation and building.

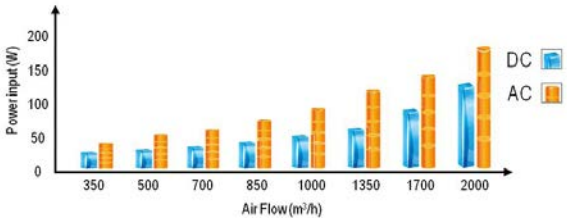
	Commercial			
				
	ELFOSpace	ELFODuct MP ELFODuct HP	ELFOSpace BOX3	ELFOSpace WALL3
Capacities (A27/W7)	1,5 ÷ 11 kW	6 ÷ 25 kW	3 ÷ 11 kW	2 ÷ 4,5 kW
Vertical cased				
Horizontal cased				
Vertical uncased				
Horizontal uncased				
2 pipes	✓	✓	✓	✓
4 pipes	✓	✓	✓	
DC Motor	✓	✓	✓	✓
High head		✓		
RS485 Connection	✓	✓	✓	✓

New 3rd generation fan coil Clivet

High energy efficiency with standard DC brushless motor

The new ventilation fan coils with DC brushless motor of the series, characterized by an advanced high efficiency, provide low levels of noise and precision of the temperature control technology. They are well suited to applications such as hospitals, offices, hotels, airports and many other applications in commercial and industrial applications.

The fan-coils having DC motor reduce the electric input up to 60%, compared to the equipped with asyncronous motor.

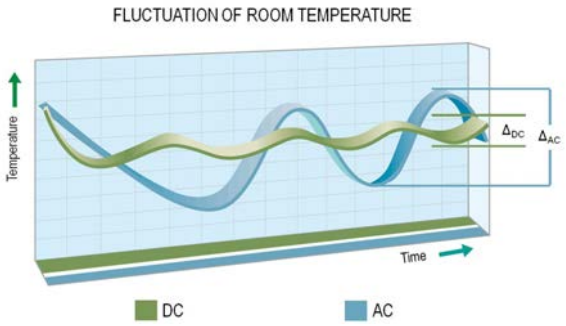


Silent operation

The particular construction features, in addiction to increasing the efficiency of the unit, minimize the noise level and make it very noiseless.
The fan-coil noise level when equipped with DC Brushless fan motor is 2÷5 dB(A) less than an AC motor, making the ambient really more comfortable.

Better control of the air temperature and humidity

The DC brushless motors regulate the air flow rate moment by moment accordingly to the thermal load, ensuring less temperature fluctuations and an emproved comfort.



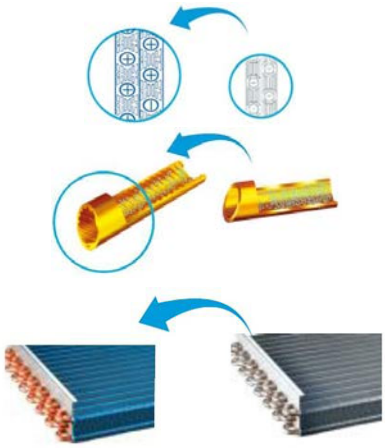
DC Brushless

The motor is in a fully closed structure thereby ensuring high operating efficiency and high durability.
The motor bearing, easy maintenance, can operate up to 80,000 hours continuously.

Main features of standard unit

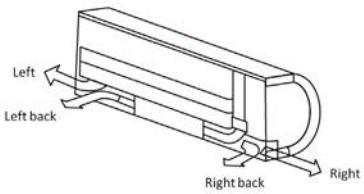
High-performance heat exchangers

The new fins design is thought to increase the exchange surface, reducing the air resistance, reducing waste and improving energy performances.
The inner threaded copper tubes optimizes the efficiency of heat exchange.
The fins hydrophilic coating increase the heat exchanger operating life, emproving longevity and corrosion resistance.
Having 2 rows in the configuration for 2 pipes installation.



Maximum installation flexibility

The models in this range have a multi-directional connection method for the installation connection pipes and for the condensate drain.
It is possible the connection to the left, right or rear, thus providing a greater installation flexibility.

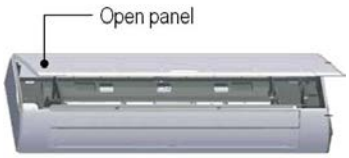


Standard 3-way valve

The unit is standard supplied with an on/off 3-way valve and an electrothermal servo-control already built-in.

Easy maintenance

The new unit's design allows you to remove the front panel for an easy access during maintenance activities.



Infrared remote control

The R05 infrared remote control allows to remotely manage the unit through a receiver placed on the air supply and return ceiling.
Features:

- Backlit

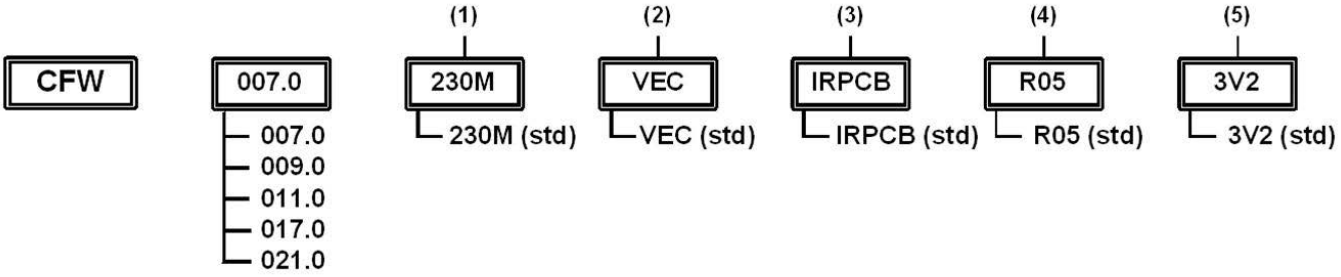
Functions:

- On/Off
- Operation selection: Auto, Heating, Cooling, Dehumidification, Ventilation
- Set the fan speed (MIN - MED - MAX or AUTO)
- Temperature setting (temperature range selectable: 17~30°C)
- Timer setting
- Setting of deflectors position (swing)

Filtration

Synthetic washable filter class G2 (EU2), easily accessible for maintenance.

Configuration Unit



(1) Voltage
- 230M - Supply voltage 230V/1Ph/50Hz (standard)

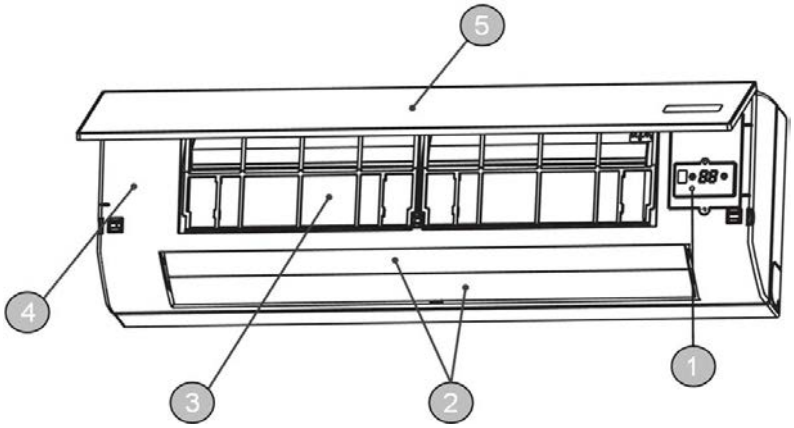
(2) Fans
- VEC - High efficiency DC Brushless fan (standard)

(3) Electronic version
- IRPCB - Electronics with infrared remote control (standard)

(4) Control
- R05 - R05 infrared remote control (standard)

(5) 3-way valve
- 3V2 - Three-way valve kit for 2-pipe "on/off" system (standard)

Description Unit



(1) Display
(2) Horizontal and vertical deflectors
(3) Air filter
(4) 3-way valve
(5) Frontal panel

External appearance

Standard unit technical specifications

Structure

Made of auto-extinguishing ABS RAL 9002 plastic, with high specifications and great resistance to aging. Thanks to independent deflectors and directional flaps, the vertical and horizontal airflow is automatically adjustable.

Internal exchanger

Heat exchanger coil with large surface in copper tubes and aluminum fins with hydrophilic treatment are mechanically bonded onto the tube by an expansion process. The water coil is also equipped with purge air valve.

Installation connection piping and condensate discharge have a multi-directional connection method allowing the connection to the left, right or rear for a maximum flexibility of the installation. The unit is standard supplied complete with a ON/OFF 3-way valve, with electro-thermal servo-control, already installed.

Fan

Fan deck made of plastic tangential fan with rubber support and single-phase 3 speed electric motor, driven by the magnetic switching of the stator, with internal thermal protection. The brushless technology and the special supply increase both the life expectancy and the efficiency.

Filtration

Washable renewable synthetic filter, G2 class (EU2), easily accessible.

Condensate drain

Drain pan made from polypropylene.

Electrical panel

The electronic board, mounted as per standard on the unit, is set to carry out different functions and adjustment modes, in order to meet the installation requirements.

The infra-red remote control, standard supplied with the unit, allows setting by a remote position the fan coil operation parameters through a receiver placed on-board.

Unit is equipped with a display for the temperature indication and operation led.

The unit is standard equipped with XYE port.

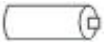
Configuration options

- 230M - Supply voltage 230V/1Ph/50Hz (standard)
- VEC - High efficiency DC Brushless fan (standard)
- IRPCB - Electronics for control with infrared remote control (standard)
- R05 - Infrared remote control R05 (standard)
- 3V2 - Three-way valve kit for 2-pipe system type "on/off" (standard)

Accessories separately supplied

- KJR90X - KJR90 electronic room control for wall installation
- KJR150X - Indoor units' group controller
- CMM30BX - Touch-key indoor units' centralized controller (with cover plate)
- CCM08X - BACnet protocol
- CMM18X - Modbus protocol for up to 64 fancoil units
- CCM18UX - Modbus protocol for up to 16 fancoil units
- LONGWX - LowWorks protocol

Accessories standard supplied

Accessory	Picture	Description	Quantity
			007.0÷021.0
Installation and operating manual		Installation and operating guide	1
Control Manual		Control Manual	1
Screw ST3.9x25		ST3.9x25 lives for installation support plate	8
Plastic tube		-	8
Packaging tape		-	1
Drain pipe		-	1
Cover wall tube		-	1
Gasket		For water pipe	4
Infrared remote control		Infrared remote control R05	1
		Pocket for remote control for wall installation	1
		Fixing screws	2
		Remote control batteries	2

General technical data

Size			007.0			009.0			011.0			017.0			021.0		
Fan Speed			**H**	**M**	**L**	**H**	**M**	**L**	**H**	**M**	**L**	**H**	**M**	**L**	**H**	**M**	**L**
Air flow		[m³/h]	425	410	320	510	427	349	680	550	504	850	692	586	1020	820	670
Cooling Performance																	
Total cooling capacity	(1)	[kW]	2,20	2,14	1,78	2,64	2,34	2,02	3,08	2,71	2,56	4,07	3,57	3,18	4,45	3,91	3,43
Sensible cooling capacity	(1)	[kW]	1,63	1,59	1,31	1,97	1,74	1,49	2,33	2,03	1,91	3,05	2,65	2,35	3,36	2,93	2,55
Water flow rate	(1)	[l/h]	380	370	310	450	400	350	530	470	440	700	610	550	770	670	590
Water pressure drop	(1)	[kPa]	23,10	22,11	16,19	33,60	27,40	21,37	42,00	33,79	30,70	34,90	27,85	22,86	36,30	29,09	23,22
Heating Performance																	
Heating capacity (45°)	(2)	[kW]	2,57	2,51	2,08	3,15	2,78	2,40	3,71	3,24	3,05	4,85	4,23	3,76	5,38	4,69	4,10
Water flow rate	(2)	[l/h]	450	430	360	550	480	420	640	560	530	840	730	650	930	810	710
Water pressure drop	(2)	[kPa]	29,95	28,65	20,81	44,14	35,63	27,58	57,16	45,16	40,80	41,73	32,90	26,85	47,32	37,26	29,43
Heating capacity (65°)	(3)	[kW]	4,57	4,45	3,70	5,60	4,94	4,26	6,59	5,76	5,43	8,63	7,52	6,69	9,57	8,34	7,28
Water flow rate	(3)	[l/h]	400	390	320	490	430	370	580	500	470	750	660	580	830	730	640
Water pressure drop	(3)	[kPa]	22,72	21,72	15,75	33,58	27,08	20,93	43,52	34,35	31,02	31,85	25,07	20,44	36,15	28,42	22,42
Sound level																	
Sound pressure level	(4)	[dB(A)]	30	26	23	32	28	25	36	32	29	38	34	30	40	36	31
Sound power level	(4)	[dB(A)]	41	37	34	44	39	36	47	43	40	49	45	41	51	47	42
Fan motor																	
Type		[-]	DC			DC			DC			DC			DC		
Quantity		[Nr]	1			1			1			1			1		
Brand		[-]	Panasonic			Panasonic			Panasonic			Panasonic			Panasonic		
Model		[-]	WZDK20-38G			WZDK20-38G			WZDK20-38G			WZDK20-38G			WZDK20-38G		
Fan																	
Type	(5)	[-]	TGZ			TGZ			TGZ			TGZ			TGZ		
Quantity		[Nr]	1			1			1			1			1		
Coil																	
Row		[Nr]	2			2			2			2			2		
Coil (length x leight)		[mm]	635 x 26.74			635 x 26.74			635 x 26.74			785 x 26.74			785 x 26.74		
Circuits		[Nr]	5			5			5			7			7		
Max. working pressure		[MPa]	1,6			1,6			1,6			1,6			1,6		
Pipe connections																	
Water inlet		[“]	3/4”			3/4”			3/4”			3/4”			3/4”		
Water outlet		[“]	3/4”			3/4”			3/4”			3/4”			3/4”		
Drain pipe	(6)	[mm]	Ø20mm			Ø20mm			Ø20mm			Ø20mm			Ø20mm		

H = High
M = Medium
L = Low
(1) Cooling: Exchanger inlet water 7°C (temperature differential 5°C)
Ambient air 27°C D.B. / 19°C W.B
(2) Heating: Exchanger inlet water 45°C (temperature differential 5°C)
Ambient air 20°C D.B
(3) Heating: Exchanger inlet water 65°C (temperature differential 10°C)
Ambient air 20°C D.B
(4) Sound levels tested in an anechoic chamber. The sound pressure level refers to a distance of 1 m from the outer surface of the unit operating in an open field.
(5) TGZ = Tangential
(6) External diameter

Electrical data

Size		007.0			009.0			011.0			017.0			021.0		
Fan speed		**H**	**M**	**L**	**H**	**M**	**L**	**H**	**M**	**L**	**H**	**M**	**L**	**H**	**M**	**L**
Electrical data																
Power supply	[V/Ph/Hz]	220-240/1/50			220-240/1/50			220-240/1/50			220-240/1/50			220-240/1/50		
Power imput	[W]	10,70	9,10	7,80	20,00	16,00	8,80	24,20	20,00	16,80	28,00	24,00	18,00	37,50	32,00	27,00
F.L.A. - Full load current at max admissible conditions	[A]	0,16			0,24			0,28			0,32			0,40		

H = High
M = Medium
L = Low
- Cooling: Exchanger inlet water 7°C (temperature differential 5°C)
Ambient air 27°C D.B. / 19°C W.B
- Heating: Exchanger inlet water 45°C (temperature differential 5°C)
Ambient air 20°C D.B
- Heating: Exchanger inlet water 65°C (temperature differential 10°C)
Ambient air 20°C D.B.

Operating limits

Size			007.0	009.0	011.0	017.0	021.0
Maximum water inlet temperature		[°C]	80	80	80	80	80
Minimum water inlet temperature		[°C]	3	3	3	3	3
Maximum operating pressure		[bar]	16	16	16	16	16
Maximum water flow rate	Cooling	[l/h]	494	585	689	689	689
	Heating	[l/h]	494	585	689	689	689
Minimum water flow rate	Cooling	[l/h]	266	315	371	371	371
	Heating	[l/h]	266	315	371	371	371
Maximum inlet air temperature Ta (W.B.)	Cooling	[°C]	40	40	40	40	40
Minimum inlet air temperature Ta (W.B.)	Cooling	[°C]	3	3	3	3	3
Maximum inlet air temperature Ta (D.B.)	Heating	[°C]	40	40	40	40	40
Minimum inlet air temperature Ta (D.B.)	Heating	[°C]	3	3	3	3	3
Relative humidity limits in the room		R.H.	20% < R.H. < 100%	20% < R.H. < 100%	20% < R.H. < 100%	20% < R.H. < 100%	20% < R.H. < 100%

- Cooling: Exchanger inlet water 7°C (temperature differential 5°C)
Ambient air 27°C D.B. / 19°C W.B.
- Heating: Exchanger inlet water 45°C (temperature differential 5°C)
Ambient air 20°C D.B.
- Heating: Exchanger inlet water 65°C ((temperature differential 10°C)
Ambient air 20°C D.B.

Sound levels

HIGH SPEED										
Size	Sound power level (dB)								Sound pressure level (at 1 meter)	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
007.0	34,8	29,8	32,5	30,0	26,8	23,9	13,2	11,2	**30**	**41**
009.0	36,1	30,5	35,5	30,5	30,1	24,5	14,2	11,3	**32**	**44**
011.0	37,7	32,1	36,9	32,6	31,0	24,9	15,5	11,7	**36**	**47**
017.0	39,5	33,6	38,6	34,5	33,5	25,6	18,5	11,8	**38**	**49**
021.0	40,2	35,8	39,6	36,5	35,1	26,8	21,0	12,2	**40**	**51**

MEDIUM SPEED										
Size	Sound power level (dB)								Sound pressure level (at 1 meter)	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
007.0	32,2	25,0	28,2	26,3	24,3	14,6	11,1	11,3	**26**	**37**
009.0	33,2	25,9	32,9	29,4	24,8	21,8	12,5	11,1	**28**	**39**
011.0	36,5	30,8	32,1	29,8	25,9	23,6	13,4	11,2	**32**	**43**
017.0	36,8	31,5	35,9	30,8	30,2	24,2	14,5	11,4	**34**	**45**
021.0	37,8	31,8	36,2	30,9	30,6	24,5	15,3	11,6	**36**	**47**

LOW SPEED										
Size	Sound power level (dB)								Sound pressure level (at 1 meter)	Sound power level
	Octave band (Hz)									
	63	125	250	500	1000	2000	4000	8000	dB(A)	dB(A)
007.0	27,9	21,5	25,3	23,2	19,8	11,8	11,2	11,0	**23**	**34**
009.0	29,2	22,0	28,2	26,3	23,3	14,6	11,7	11,3	**25**	**36**
011.0	33,5	28,9	30,9	29,1	25,6	22,3	13,0	11,1	**29**	**40**
017.0	34,2	30,0	33,1	29,9	27,5	24,2	13,5	11,2	**30**	**41**
021.0	35,0	30,1	33,9	30,5	28,6	24,5	13,8	11,3	**31**	**42**

- Sound levels tested in an anechoic chamber. The sound pressure level refers to a distance of 1 m from the outer surface of the unit operating in an open field.

Cooling performance

007.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
5	3	15	1,84	1,40	530	41,89	1,81	1,59	520	40,67	1,83	1,81	520	41,24	2,00	2,00	570	48,26	2,19	2,19	630	56,37	2,29	2,29	660	60,60
		17	2,39	1,38	690	65,60	2,38	1,58	680	64,79	2,31	1,75	660	61,54	2,28	1,95	650	60,29	2,31	2,16	660	61,60	2,35	2,28	670	63,44
		19	2,99	1,35	860	96,31	2,97	1,56	850	95,45	2,94	1,75	850	93,91	2,88	1,93	830	90,64	2,87	2,13	820	89,64	2,88	2,24	830	90,43
		21	-	-	-	-	3,61	1,53	1040	134,02	3,59	1,73	1030	132,92	3,57	1,93	1030	131,15	3,52	2,12	1010	128,23	3,50	2,21	1010	127,15
		23	-	-	-	-	-	-	-	-	4,27	1,70	1230	180,41	4,26	1,90	1230	179,35	4,23	2,10	1220	177,52	4,22	2,20	1220	176,35
	5	15	1,57	1,27	270	13,10	1,58	1,49	270	13,35	1,69	1,69	290	15,06	1,88	1,88	320	18,03	2,07	2,07	360	21,22	2,17	2,17	370	22,89
		17	2,12	1,25	360	22,04	2,11	1,46	360	21,82	2,06	1,64	350	21,06	2,02	1,83	350	20,29	2,12	2,08	360	22,11	2,19	2,19	380	23,36
		19	2,71	1,23	470	33,57	2,70	1,43	460	33,28	2,68	1,63	460	32,85	2,61	1,81	450	31,41	2,57	2,00	440	30,63	2,58	2,10	440	30,81
		21	-	-	-	-	3,34	1,41	570	47,83	3,32	1,61	570	47,44	3,30	1,81	570	46,76	3,24	1,99	560	45,37	3,21	2,08	550	44,61
		23	-	-	-	-	-	-	-	-	4,01	1,58	690	65,45	3,99	1,78	690	65,00	3,96	1,98	680	64,24	3,94	2,08	680	63,69
	7	15	1,31	1,16	160	3,50	1,41	1,41	170	3,93	1,56	1,56	190	5,08	1,76	1,76	220	7,49	1,95	1,95	240	10,10	2,04	2,04	250	11,29
		17	1,81	1,12	220	8,33	1,81	1,32	220	8,25	1,79	1,52	220	7,97	1,83	1,75	220	8,56	1,98	1,98	240	10,45	2,06	2,06	250	11,45
		19	2,42	1,10	300	15,43	2,40	1,30	300	15,29	2,39	1,51	290	15,12	2,34	1,69	290	14,60	2,26	1,86	280	13,74	2,29	1,98	280	14,00
		21	-	-	-	-	3,05	1,28	370	22,87	3,03	1,48	370	22,68	3,01	1,68	370	22,40	2,94	1,86	360	21,53	2,90	1,95	360	20,96
		23	-	-	-	-	-	-	-	-	3,72	1,46	460	32,09	3,70	1,66	460	31,86	3,68	1,86	450	31,45	3,65	1,95	450	31,10
7	3	15	1,43	1,21	410	26,73	1,46	1,43	420	27,59	1,61	1,61	460	32,83	1,81	1,81	520	39,79	2,00	2,00	570	47,25	2,09	2,09	600	51,16
		17	1,97	1,19	570	46,33	1,96	1,39	560	45,90	1,93	1,58	550	44,46	1,87	1,77	540	42,28	2,00	2,00	570	47,47	2,09	2,09	600	51,21
		19	2,57	1,16	740	72,87	2,55	1,37	730	72,18	2,53	1,57	730	71,27	2,46	1,74	710	67,62	2,41	1,93	690	65,47	2,42	2,03	700	65,84
		21	-	-	-	-	3,19	1,34	920	106,33	3,17	1,54	910	105,36	3,14	1,74	900	103,67	3,08	1,92	890	100,00	3,04	2,01	880	97,82
		23	-	-	-	-	-	-	-	-	3,86	1,51	1110	148,41	3,84	1,72	1110	147,19	3,81	1,91	1100	145,24	3,79	2,01	1090	143,74
	5	15	1,18	1,10	200	6,47	1,31	1,31	230	8,86	1,49	1,49	260	11,85	1,68	1,68	290	14,70	1,88	1,88	320	17,65	1,97	1,97	340	19,18
		17	1,68	1,06	290	14,56	1,67	1,27	290	14,50	1,66	1,47	290	14,30	1,71	1,70	290	15,10	1,88	1,88	320	17,67	1,97	1,97	340	19,20
		19	2,27	1,04	390	24,44	2,26	1,24	390	24,20	2,25	1,45	390	23,95	2,20	1,63	380	23,10	2,11	1,80	360	21,53	2,13	1,91	370	21,94
		21	-	-	-	-	2,90	1,22	500	36,98	2,88	1,42	500	36,65	2,86	1,62	490	36,18	2,79	1,80	480	34,57	2,74	1,88	470	33,48
		23	-	-	-	-	-	-	-	-	3,57	1,39	610	52,84	3,55	1,60	610	52,40	3,52	1,79	610	51,66	3,50	1,89	600	51,00
	7	15	1,01	1,01	120	2,53	1,17	1,17	140	2,97	1,36	1,36	170	3,66	1,56	1,56	190	5,44	1,75	1,75	220	7,94	1,85	1,85	230	9,14
		17	1,33	0,91	160	3,46	1,37	1,14	170	3,68	1,45	1,38	180	4,33	1,57	1,57	190	5,60	1,75	1,75	220	7,95	1,85	1,85	230	9,15
		19	1,95	0,90	240	10,28	1,94	1,11	240	10,16	1,93	1,32	240	10,09	1,90	1,51	230	9,74	1,88	1,71	230	9,56	1,94	1,83	240	10,19
		21	-	-	-	-	2,59	1,09	320	17,01	2,57	1,29	320	16,85	2,55	1,50	310	16,67	2,50	1,68	310	16,09	2,44	1,76	300	15,46
		23	-	-	-	-	-	-	-	-	3,26	1,27	400	25,24	3,25	1,47	400	25,02	3,22	1,67	400	24,71	3,19	1,76	390	24,37
9	3	15	1,06	1,05	300	15,73	1,22	1,22	350	20,09	1,42	1,42	410	25,85	1,61	1,61	460	32,15	1,80	1,80	520	38,97	1,90	1,90	540	42,57
		17	1,53	1,00	440	29,38	1,52	1,20	440	29,28	1,52	1,41	440	29,04	1,61	1,61	460	32,17	1,80	1,80	520	39,00	1,90	1,90	540	42,60
		19	2,12	0,97	610	51,57	2,11	1,18	610	51,01	2,09	1,38	600	50,53	2,05	1,57	590	48,85	1,95	1,74	560	44,66	1,97	1,85	570	45,62
		21	-	-	-	-	2,74	1,15	790	80,52	2,73	1,36	780	79,74	2,71	1,56	780	78,71	2,62	1,73	760	74,62	2,57	1,81	740	71,80
		23	-	-	-	-	-	-	-	-	3,41	1,33	980	117,85	3,39	1,53	980	116,77	3,36	1,73	970	114,89	3,33	1,82	960	113,17
	5	15	0,91	0,91	160	3,17	1,10	1,10	190	5,34	1,29	1,29	220	8,85	1,49	1,49	260	11,69	1,68	1,68	290	14,40	1,78	1,78	310	15,82
		17	1,19	0,86	210	7,18	1,23	1,09	210	7,90	1,33	1,33	230	9,51	1,49	1,49	260	11,69	1,68	1,68	290	14,42	1,78	1,78	310	15,83
		19	1,80	0,84	310	16,18	1,79	1,05	310	16,01	1,78	1,26	310	15,94	1,76	1,46	300	15,58	1,75	1,65	300	15,37	1,81	1,78	310	16,31
		21	-	-	-	-	2,43	1,03	420	26,95	2,42	1,23	420	26,68	2,40	1,44	410	26,40	2,35	1,62	400	25,41	2,28	1,70	390	24,25
		23	-	-	-	-	-	-	-	-	3,10	1,21	530	40,90	3,09	1,41	530	40,52	3,06	1,61	530	39,99	3,03	1,70	520	39,35
	7	15	0,76	0,76	90	1,81	0,96	0,96	120	2,30	1,16	1,16	140	2,80	1,36	1,36	170	3,76	1,56	1,56	190	5,86	1,65	1,65	200	7,07
		17	0,88	0,74	110	2,09	1,03	1,01	130	2,45	1,18	1,18	150	2,85	1,36	1,36	170	3,76	1,56	1,56	190	5,87	1,65	1,65	200	7,07
		19	1,42	0,70	170	4,36	1,42	0,91	170	4,32	1,44	1,13	180	4,57	1,51	1,36	190	5,29	1,59	1,59	200	6,30	1,67	1,67	210	7,27
		21	-	-	-	-	2,08	0,89	260	11,59	2,07	1,10	250	11,47	2,06	1,31	250	11,40	2,03	1,50	250	11,07	1,99	1,59	240	10,68
		23	-	-	-	-	-	-	-	-	2,77	1,08	340	18,79	2,75	1,28	340	18,61	2,73	1,48	340	18,41	2,71	1,58	330	18,19

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

007.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
11	3	15	0,82	0,82	240	10,07	1,02	1,02	290	14,62	1,22	1,22	350	19,68	1,41	1,41	410	25,32	1,60	1,60	460	31,50	1,70	1,70	490	34,78
		17	1,05	0,80	300	15,20	1,09	1,03	310	16,37	1,22	1,22	350	19,76	1,41	1,41	410	25,34	1,60	1,60	460	31,52	1,70	1,70	490	34,81
		19	1,64	0,78	470	32,72	1,63	0,99	470	32,34	1,63	1,20	470	32,22	1,61	1,40	460	31,64	1,61	1,60	460	31,84	1,70	1,70	490	34,84
		21	-	-	-	-	2,27	0,96	650	57,02	2,25	1,17	650	56,38	2,24	1,37	640	55,84	2,19	1,56	630	53,94	2,12	1,64	610	50,99
		23	-	-	-	-	-	-	-	-	2,93	1,14	850	89,29	2,92	1,34	840	88,41	2,89	1,54	830	87,26	2,86	1,64	830	85,69
	5	15	0,69	0,69	120	2,26	0,89	0,89	150	3,04	1,09	1,09	190	5,77	1,29	1,29	220	8,90	1,48	1,48	260	11,48	1,58	1,58	270	12,77
		17	0,77	0,70	130	2,49	0,92	0,92	160	3,25	1,09	1,09	190	5,78	1,29	1,29	220	8,91	1,48	1,48	260	11,49	1,58	1,58	270	12,78
		19	1,28	0,64	220	8,72	1,27	0,85	220	8,69	1,30	1,07	220	9,04	1,37	1,31	240	10,02	1,49	1,49	260	11,54	1,58	1,58	270	12,80
		21	-	-	-	-	1,93	0,84	330	17,85	1,91	1,04	330	17,66	1,91	1,25	330	17,57	1,88	1,45	320	17,15	1,84	1,53	320	16,55
		23	-	-	-	-	-	-	-	-	2,60	1,02	450	29,82	2,59	1,22	450	29,51	2,57	1,42	440	29,20	2,55	1,52	440	28,84
	7	15	-	-	-	-	0,76	0,76	90	1,71	0,96	0,96	120	2,18	1,16	1,16	140	2,68	1,36	1,36	170	3,98	1,46	1,46	180	5,06
		17	-	-	-	-	0,77	0,77	90	1,73	0,96	0,96	120	2,18	1,16	1,16	140	2,68	1,36	1,36	170	3,99	1,46	1,46	180	5,06
		19	-	-	-	-	0,92	0,73	110	2,06	1,06	0,99	130	2,39	1,20	1,20	150	2,84	1,36	1,36	170	4,01	1,46	1,46	180	5,07
		21	-	-	-	-	1,52	0,69	190	5,88	1,52	0,90	190	5,84	1,53	1,11	190	5,99	1,57	1,34	190	6,46	1,60	1,45	200	6,76
		23	-	-	-	-	-	-	-	-	2,23	0,89	270	12,84	2,22	1,09	270	12,70	2,21	1,30	270	12,63	2,20	1,40	270	12,53
13	3	15	0,62	0,62	180	4,98	0,82	0,82	240	9,93	1,02	1,02	290	14,32	1,21	1,21	350	19,29	1,41	1,41	400	24,82	1,50	1,50	430	27,78
		17	0,64	0,64	190	5,66	0,82	0,82	240	9,93	1,02	1,02	290	14,33	1,21	1,21	350	19,30	1,41	1,41	400	24,84	1,50	1,50	430	27,80
		19	1,12	0,59	320	16,70	1,12	0,80	320	16,69	1,14	1,02	330	17,43	1,24	1,24	360	19,88	1,41	1,41	410	24,85	1,50	1,50	430	27,83
		21	-	-	-	-	1,75	0,77	500	36,18	1,74	0,98	500	35,74	1,74	1,19	500	35,60	1,72	1,39	490	34,94	1,70	1,48	490	34,23
		23	-	-	-	-	-	-	-	-	2,42	0,95	700	63,27	2,41	1,16	690	62,54	2,39	1,36	690	61,92	2,38	1,46	690	61,36
	5	15	-	-	-	-	0,69	0,69	120	2,14	0,89	0,89	150	3,10	1,09	1,09	190	6,09	1,29	1,29	220	8,83	1,38	1,38	240	10,04
		17	-	-	-	-	0,69	0,69	120	2,14	0,89	0,89	150	3,11	1,09	1,09	190	6,10	1,29	1,29	220	8,84	1,38	1,38	240	10,04
		19	-	-	-	-	0,79	0,68	140	2,46	0,94	0,94	160	3,69	1,10	1,10	190	6,22	1,29	1,29	220	8,84	1,38	1,38	240	10,05
		21	-	-	-	-	1,36	0,64	240	9,79	1,36	0,85	240	9,77	1,38	1,06	240	9,93	1,42	1,28	250	10,54	1,47	1,40	250	11,09
		23	-	-	-	-	-	-	-	-	2,06	0,83	360	19,76	2,05	1,03	350	19,53	2,04	1,24	350	19,43	2,04	1,34	350	19,32
	7	15	-	-	-	-	-	-	-	-	0,76	0,76	90	1,62	0,96	0,96	120	2,07	1,16	1,16	140	2,64	1,26	1,26	160	3,31
		17	-	-	-	-	-	-	-	-	0,76	0,76	90	1,62	0,96	0,96	120	2,07	1,16	1,16	140	2,65	1,26	1,26	160	3,31
		19	-	-	-	-	-	-	-	-	0,77	0,77	100	1,66	0,96	0,96	120	2,07	1,16	1,16	140	2,65	1,26	1,26	160	3,32
		21	-	-	-	-	-	-	-	-	0,96	0,71	120	2,04	1,09	0,97	130	2,37	1,23	1,22	150	3,09	1,30	1,30	160	3,72
		23	-	-	-	-	-	-	-	-	1,63	0,69	200	7,20	1,62	0,89	200	7,18	1,63	1,11	200	7,27	1,64	1,21	200	7,31
15	3	15	-	-	-	-	0,62	0,62	180	5,33	0,82	0,82	240	9,75	1,02	1,02	290	14,04	1,21	1,21	350	18,91	1,31	1,31	380	21,56
		17	-	-	-	-	0,62	0,62	180	5,33	0,82	0,82	240	9,76	1,02	1,02	290	14,05	1,21	1,21	350	18,93	1,31	1,31	380	21,57
		19	-	-	-	-	0,66	0,64	190	6,39	0,82	0,82	240	9,85	1,02	1,02	290	14,06	1,21	1,21	350	18,94	1,31	1,31	380	21,59
		21	-	-	-	-	1,19	0,58	340	18,43	1,19	0,79	340	18,41	1,21	1,00	350	18,83	1,27	1,23	360	20,40	1,33	1,33	380	22,13
		23	-	-	-	-	-	-	-	-	1,88	0,77	540	40,15	1,86	0,97	540	39,63	1,86	1,18	540	39,46	1,85	1,28	530	39,23
	5	15	-	-	-	-	-	-	-	-	0,69	0,69	120	2,03	0,89	0,89	150	3,30	1,09	1,09	190	6,28	1,19	1,19	200	7,54
		17	-	-	-	-	-	-	-	-	0,69	0,69	120	2,03	0,89	0,89	150	3,30	1,09	1,09	190	6,28	1,19	1,19	200	7,55
		19	-	-	-	-	-	-	-	-	0,69	0,69	120	2,03	0,89	0,89	150	3,30	1,09	1,09	190	6,29	1,19	1,19	200	7,55
		21	-	-	-	-	-	-	-	-	0,83	0,67	140	2,62	0,96	0,92	170	4,38	1,11	1,11	190	6,59	1,19	1,19	210	7,63
		23	-	-	-	-	-	-	-	-	1,46	0,63	250	10,83	1,46	0,84	250	10,82	1,47	1,05	250	10,95	1,47	1,16	250	11,00
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	0,75	0,75	90	1,54	0,96	0,96	120	1,96	1,06	1,06	130	2,21
		17	-	-	-	-	-	-	-	-	-	-	-	-	0,75	0,75	90	1,54	0,96	0,96	120	1,96	1,06	1,06	130	2,21
		19	-	-	-	-	-	-	-	-	-	-	-	-	0,75	0,75	90	1,54	0,96	0,96	120	1,96	1,06	1,06	130	2,22
		21	-	-	-	-	-	-	-	-	-	-	-	-	0,79	0,79	100	1,60	0,97	0,97	120	1,98	1,06	1,06	130	2,22
		23	-	-	-	-	-	-	-	-	-	-	-	-	1,01	0,70	120	2,04	1,13	0,95	140	2,56	1,20	1,07	150	3,05

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

009.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
5	3	15	2,20	1,68	630	60,44	2,18	1,93	630	59,50	2,19	2,19	630	60,19	2,41	2,41	690	70,98	2,64	2,64	760	83,02	2,76	2,76	790	89,32
		17	2,86	1,65	820	94,87	2,84	1,90	820	93,99	2,78	2,12	800	90,78	2,71	2,34	780	86,66	2,74	2,60	790	88,40	2,80	2,76	810	91,91
		19	3,57	1,61	1030	139,64	3,55	1,86	1020	138,42	3,52	2,11	1010	136,73	3,46	2,33	990	132,10	3,40	2,55	980	128,52	3,41	2,68	980	129,09
		21	-	-	-	-	4,31	1,82	1250	194,95	4,29	2,07	1240	193,29	4,26	2,31	1230	190,94	4,21	2,54	1210	186,43	4,17	2,65	1200	183,36
		23	-	-	-	-	-	-	-	-	5,11	2,03	1480	263,28	5,09	2,28	1470	261,49	5,06	2,52	1470	258,92	5,04	2,64	1460	257,03
	5	15	1,87	1,53	320	18,97	1,90	1,80	330	19,60	2,04	2,04	350	22,01	2,27	2,27	390	26,39	2,50	2,50	430	31,10	2,61	2,61	450	33,56
		17	2,52	1,50	430	31,63	2,51	1,75	430	31,38	2,48	1,99	430	30,66	2,41	2,21	410	29,23	2,54	2,51	440	31,97	2,63	2,63	450	33,95
		19	3,24	1,46	560	48,33	3,22	1,71	550	47,90	3,20	1,96	550	47,41	3,14	2,19	540	45,90	3,05	2,40	530	43,74	3,05	2,52	530	43,69
		21	-	-	-	-	3,98	1,68	690	69,04	3,96	1,93	680	68,47	3,94	2,17	680	67,68	3,87	2,39	670	65,69	3,82	2,49	660	64,14
		23	-	-	-	-	-	-	-	-	4,79	1,88	820	94,73	4,76	2,13	820	94,02	4,74	2,37	820	93,02	4,71	2,49	810	92,19
	7	15	1,56	1,39	190	5,03	1,70	1,70	210	6,47	1,88	1,88	230	9,12	2,12	2,12	260	12,61	2,35	2,35	290	15,60	2,46	2,46	300	17,00
		17	2,15	1,33	260	13,11	2,15	1,59	260	13,06	2,14	1,84	260	12,98	2,19	2,11	270	13,64	2,37	2,37	290	15,85	2,47	2,47	300	17,10
		19	2,88	1,31	350	22,13	2,86	1,56	350	21,92	2,85	1,81	350	21,73	2,80	2,04	340	21,19	2,71	2,25	330	19,94	2,71	2,38	330	20,04
		21	-	-	-	-	3,63	1,52	450	32,83	3,61	1,77	440	32,56	3,59	2,02	440	32,23	3,53	2,24	430	31,29	3,45	2,34	420	30,17
		23	-	-	-	-	-	-	-	-	4,44	1,73	550	46,21	4,42	1,98	540	45,85	4,39	2,22	540	45,37	4,36	2,34	540	44,87
7	3	15	1,70	1,46	490	38,42	1,75	1,73	500	40,16	1,94	1,94	560	48,17	2,18	2,18	630	58,49	2,41	2,41	690	69,56	2,52	2,52	730	75,38
		17	2,35	1,42	680	66,76	2,34	1,67	670	66,21	2,32	1,92	670	65,12	2,24	2,13	640	61,40	2,41	2,41	690	69,64	2,52	2,52	730	75,44
		19	3,06	1,39	880	105,36	3,04	1,64	880	104,35	3,03	1,88	870	103,35	2,96	2,11	850	99,68	2,87	2,32	830	94,06	2,86	2,44	820	93,77
		21	-	-	-	-	3,81	1,60	1100	154,14	3,79	1,85	1090	152,76	3,76	2,09	1080	150,87	3,69	2,31	1060	145,70	3,62	2,41	1050	141,54
		23	-	-	-	-	-	-	-	-	4,61	1,81	1330	215,88	4,58	2,05	1330	214,00	4,55	2,29	1320	211,41	4,53	2,41	1310	209,22
	5	15	1,41	1,33	240	10,98	1,57	1,57	270	13,83	1,80	1,80	310	17,48	2,03	2,03	350	21,52	2,26	2,26	390	25,85	2,38	2,38	410	28,13
		17	1,99	1,27	340	20,81	1,99	1,52	340	20,76	1,99	1,77	340	20,77	2,05	2,05	350	21,97	2,26	2,26	390	25,87	2,38	2,38	410	28,15
		19	2,71	1,24	470	35,08	2,69	1,49	460	34,71	2,68	1,74	460	34,43	2,64	1,97	450	33,60	2,53	2,18	440	31,30	2,54	2,30	440	31,42
		21	-	-	-	-	3,46	1,45	600	53,23	3,44	1,70	590	52,75	3,42	1,94	590	52,20	3,35	2,17	580	50,47	3,27	2,26	560	48,42
		23	-	-	-	-	-	-	-	-	4,26	1,66	730	76,26	4,24	1,91	730	75,61	4,21	2,15	730	74,74	4,18	2,26	720	73,79
	7	15	1,20	1,20	150	3,37	1,41	1,41	170	4,09	1,64	1,64	200	6,25	1,88	1,88	230	9,64	2,11	2,11	260	12,70	2,23	2,23	270	14,06
		17	1,57	1,09	190	5,45	1,63	1,37	200	6,12	1,74	1,67	210	7,71	1,89	1,89	230	9,80	2,11	2,11	260	12,71	2,23	2,23	270	14,07
		19	2,31	1,07	280	14,98	2,30	1,32	280	14,81	2,29	1,58	280	14,76	2,27	1,82	280	14,51	2,26	2,07	280	14,45	2,32	2,21	280	15,04
		21	-	-	-	-	3,07	1,30	380	24,35	3,06	1,54	380	24,11	3,04	1,79	370	23,90	3,00	2,03	370	23,30	2,94	2,13	360	22,53
		23	-	-	-	-	-	-	-	-	3,88	1,51	480	36,23	3,86	1,76	480	35,91	3,84	2,00	470	35,55	3,82	2,12	470	35,17
9	3	15	1,26	1,26	360	22,77	1,47	1,47	420	29,41	1,71	1,71	490	37,90	1,94	1,94	560	47,23	2,17	2,17	620	57,34	2,29	2,29	660	62,69
		17	1,81	1,19	520	42,09	1,81	1,45	520	42,06	1,81	1,70	520	42,12	1,94	1,94	560	47,26	2,17	2,17	620	57,39	2,29	2,29	660	62,74
		19	2,52	1,16	730	74,32	2,51	1,41	720	73,47	2,50	1,66	720	72,84	2,47	1,90	710	71,62	2,35	2,10	680	65,59	2,35	2,23	680	65,92
		21	-	-	-	-	3,27	1,37	940	116,37	3,25	1,62	940	115,23	3,23	1,87	930	114,11	3,16	2,09	910	109,90	3,07	2,19	890	104,65
		23	-	-	-	-	-	-	-	-	4,07	1,58	1180	170,78	4,05	1,83	1170	169,22	4,02	2,07	1160	167,10	3,98	2,18	1150	164,67
	5	15	1,09	1,09	190	4,99	1,32	1,32	230	9,45	1,56	1,56	270	13,45	1,79	1,79	310	17,15	2,02	2,02	350	21,10	2,14	2,14	370	23,18
		17	1,41	1,03	240	11,16	1,47	1,31	250	12,12	1,60	1,60	280	14,13	1,79	1,79	310	17,16	2,03	2,03	350	21,11	2,14	2,14	370	23,20
		19	2,14	1,01	370	23,11	2,12	1,26	370	22,84	2,12	1,51	370	22,78	2,11	1,76	360	22,53	2,11	2,01	360	22,54	2,17	2,16	370	23,68
		21	-	-	-	-	2,89	1,23	500	38,67	2,87	1,47	500	38,25	2,86	1,72	490	37,93	2,82	1,96	490	37,00	2,76	2,06	480	35,66
		23	-	-	-	-	-	-	-	-	3,69	1,44	640	58,84	3,67	1,68	630	58,29	3,65	1,93	630	57,68	3,63	2,05	630	57,04
	7	15	0,91	0,91	110	2,42	1,16	1,16	140	3,08	1,40	1,40	170	4,08	1,64	1,64	200	6,76	1,87	1,87	230	9,93	1,99	1,99	250	11,32
		17	1,05	0,89	130	2,76	1,23	1,22	150	3,26	1,42	1,42	170	4,24	1,64	1,64	200	6,76	1,88	1,88	230	9,94	1,99	1,99	250	11,32
		19	1,68	0,83	210	7,43	1,67	1,09	210	7,34	1,71	1,35	210	7,83	1,80	1,64	220	9,04	1,92	1,92	240	10,47	2,00	2,00	250	11,46
		21	-	-	-	-	2,47	1,06	300	16,54	2,45	1,31	300	16,36	2,45	1,57	300	16,30	2,42	1,81	300	16,03	2,39	1,92	290	15,60
		23	-	-	-	-	-	-	-	-	3,29	1,28	410	26,89	3,27	1,53	400	26,61	3,25	1,78	400	26,37	3,24	1,90	400	26,15

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

009.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
11	3	15	0,99	0,99	280	14,81	1,23	1,23	350	21,37	1,47	1,47	420	28,84	1,70	1,70	490	37,17	1,93	1,93	560	46,32	2,05	2,05	590	51,20
		17	1,24	0,96	360	21,57	1,30	1,24	370	23,59	1,47	1,47	420	28,91	1,70	1,70	490	37,19	1,94	1,94	560	46,36	2,05	2,05	590	51,23
		19	1,95	0,93	560	46,89	1,93	1,18	560	46,30	1,93	1,44	560	46,24	1,92	1,69	550	45,71	1,96	1,95	560	47,49	2,05	2,05	590	51,27
		21	-	-	-	-	2,70	1,15	780	82,15	2,68	1,40	770	81,16	2,66	1,65	770	80,43	2,64	1,89	760	79,00	2,58	1,99	740	76,18
		23	-	-	-	-	-	-	-	-	3,49	1,36	1010	128,99	3,47	1,61	1000	127,69	3,45	1,85	1000	126,42	3,43	1,97	990	125,00
	5	15	0,83	0,83	140	3,02	1,08	1,08	190	5,23	1,32	1,32	230	9,67	1,55	1,55	270	13,24	1,79	1,79	310	16,82	1,90	1,90	330	18,72
		17	0,91	0,84	160	3,35	1,10	1,10	190	5,71	1,32	1,32	230	9,68	1,55	1,55	270	13,25	1,79	1,79	310	16,83	1,91	1,91	330	18,73
		19	1,51	0,77	260	12,61	1,51	1,02	260	12,53	1,54	1,29	270	13,08	1,64	1,58	280	14,58	1,80	1,80	310	17,03	1,91	1,91	330	18,74
		21	-	-	-	-	2,29	1,00	390	25,48	2,27	1,25	390	25,17	2,27	1,50	390	25,09	2,25	1,75	390	24,80	2,21	1,86	380	24,14
		23	-	-	-	-	-	-	-	-	3,09	1,21	530	42,76	3,07	1,46	530	42,28	3,06	1,71	530	41,92	3,04	1,83	530	41,58
	7	15	-	-	-	-	0,91	0,91	110	2,28	1,16	1,16	140	2,92	1,40	1,40	170	4,26	1,64	1,64	200	7,19	1,75	1,75	220	8,67
		17	-	-	-	-	0,92	0,92	110	2,31	1,16	1,16	140	2,92	1,40	1,40	170	4,26	1,64	1,64	200	7,20	1,75	1,75	220	8,68
		19	-	-	-	-	1,09	0,88	130	2,72	1,26	1,19	160	3,28	1,44	1,44	180	4,74	1,64	1,64	200	7,28	1,76	1,76	220	8,69
		21	-	-	-	-	1,79	0,82	220	9,17	1,79	1,08	220	9,13	1,81	1,34	220	9,34	1,88	1,61	230	10,09	1,92	1,75	240	10,53
		23	-	-	-	-	-	-	-	-	2,64	1,06	330	18,27	2,63	1,30	320	18,06	2,62	1,56	320	17,99	2,61	1,68	320	17,91
13	3	15	0,75	0,75	210	8,62	0,99	0,99	280	14,54	1,23	1,23	350	20,96	1,46	1,46	420	28,30	1,70	1,70	490	36,48	1,81	1,81	520	40,87
		17	0,77	0,77	220	9,27	0,99	0,99	280	14,54	1,23	1,23	350	20,98	1,46	1,46	420	28,31	1,70	1,70	490	36,50	1,81	1,81	520	40,90
		19	1,32	0,70	380	23,74	1,32	0,96	380	23,69	1,36	1,23	390	24,98	1,48	1,48	430	29,00	1,70	1,70	490	36,52	1,82	1,82	520	40,92
		21	-	-	-	-	2,08	0,92	600	51,82	2,07	1,17	600	51,11	2,06	1,43	590	51,03	2,05	1,67	590	50,43	2,03	1,79	580	49,47
		23	-	-	-	-	-	-	-	-	2,88	1,14	830	91,09	2,86	1,39	830	89,94	2,85	1,63	820	89,11	2,84	1,76	820	88,59
	5	15	-	-	-	-	0,83	0,83	140	2,87	1,07	1,07	190	5,66	1,31	1,31	230	9,70	1,55	1,55	270	13,00	1,67	1,67	290	14,72
		17	-	-	-	-	0,83	0,83	140	2,87	1,07	1,07	190	5,67	1,31	1,31	230	9,70	1,55	1,55	270	13,01	1,67	1,67	290	14,72
		19	-	-	-	-	0,94	0,83	160	3,66	1,12	1,12	190	6,59	1,32	1,32	230	9,80	1,55	1,55	270	13,02	1,67	1,67	290	14,73
		21	-	-	-	-	1,61	0,76	280	13,88	1,61	1,02	280	13,85	1,63	1,28	280	14,13	1,70	1,55	290	15,26	1,76	1,70	300	16,09
		23	-	-	-	-	-	-	-	-	2,45	0,99	420	28,18	2,43	1,24	420	27,82	2,42	1,49	420	27,72	2,42	1,61	420	27,62
	7	15	-	-	-	-	-	-	-	-	0,91	0,91	110	2,17	1,15	1,15	140	2,80	1,40	1,40	170	4,56	1,52	1,52	190	6,02
		17	-	-	-	-	-	-	-	-	0,91	0,91	110	2,17	1,15	1,15	140	2,80	1,40	1,40	170	4,56	1,52	1,52	190	6,03
		19	-	-	-	-	-	-	-	-	0,93	0,93	110	2,21	1,16	1,16	140	2,80	1,40	1,40	170	4,57	1,52	1,52	190	6,03
		21	-	-	-	-	-	-	-	-	1,14	0,86	140	2,72	1,30	1,17	160	3,65	1,47	1,47	180	5,53	1,56	1,56	190	6,61
		23	-	-	-	-	-	-	-	-	1,92	0,81	240	10,39	1,92	1,07	240	10,41	1,93	1,33	240	10,49	1,94	1,46	240	10,65
15	3	15	-	-	-	-	0,75	0,75	210	8,71	0,99	0,99	280	14,26	1,22	1,22	350	20,58	1,46	1,46	420	27,77	1,58	1,58	450	31,69
		17	-	-	-	-	0,75	0,75	210	8,71	0,99	0,99	280	14,27	1,22	1,22	350	20,58	1,46	1,46	420	27,79	1,58	1,58	450	31,71
		19	-	-	-	-	0,79	0,77	230	9,71	0,99	0,99	280	14,35	1,22	1,22	350	20,60	1,46	1,46	420	27,81	1,58	1,58	450	31,73
		21	-	-	-	-	1,41	0,69	410	26,10	1,41	0,95	410	26,13	1,43	1,21	410	26,84	1,52	1,49	440	29,74	1,59	1,59	460	32,28
		23	-	-	-	-	-	-	-	-	2,23	0,92	640	57,43	2,21	1,16	640	56,61	2,21	1,42	640	56,50	2,20	1,54	640	56,32
	5	15	-	-	-	-	-	-	-	-	0,83	0,83	140	2,76	1,07	1,07	190	6,04	1,31	1,31	230	9,60	1,43	1,43	250	11,16
		17	-	-	-	-	-	-	-	-	0,83	0,83	140	2,76	1,07	1,07	190	6,04	1,31	1,31	230	9,61	1,43	1,43	250	11,17
		19	-	-	-	-	-	-	-	-	0,83	0,83	140	2,76	1,07	1,07	190	6,05	1,31	1,31	230	9,62	1,43	1,43	250	11,18
		21	-	-	-	-	-	-	-	-	0,98	0,81	170	4,52	1,15	1,12	200	7,33	1,33	1,33	230	9,91	1,43	1,43	250	11,24
		23	-	-	-	-	-	-	-	-	1,72	0,75	300	15,25	1,72	1,01	300	15,32	1,73	1,27	300	15,45	1,75	1,40	300	15,71
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	0,91	0,91	110	2,06	1,15	1,15	140	2,74	1,27	1,27	160	3,59
		17	-	-	-	-	-	-	-	-	-	-	-	-	0,91	0,91	110	2,06	1,15	1,15	140	2,74	1,27	1,27	160	3,59
		19	-	-	-	-	-	-	-	-	-	-	-	-	0,91	0,91	110	2,06	1,15	1,15	140	2,74	1,27	1,27	160	3,59
		21	-	-	-	-	-	-	-	-	-	-	-	-	0,94	0,94	120	2,13	1,16	1,16	140	2,79	1,28	1,28	160	3,61
		23	-	-	-	-	-	-	-	-	-	-	-	-	1,19	0,85	150	2,96	1,35	1,15	170	4,40	1,43	1,30	180	5,38

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

011.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
5	3	15	2,55	1,98	730	75,02	2,54	2,28	730	74,36	2,59	2,59	740	76,91	2,85	2,85	820	90,99	3,13	3,13	900	106,68	3,26	3,26	940	114,90
		17	3,32	1,93	950	118,22	3,30	2,23	950	117,24	3,28	2,52	940	115,83	3,17	2,77	910	109,32	3,18	3,08	920	110,02	3,28	3,27	940	115,79
		19	4,14	1,87	1200	174,75	4,12	2,17	1190	173,26	4,10	2,47	1180	171,81	4,05	2,75	1170	167,86	3,94	3,00	1140	159,62	3,92	3,14	1130	158,46
		21	-	-	-	-	5,02	2,12	1450	244,96	4,99	2,41	1450	242,94	4,97	2,71	1440	240,72	4,91	2,98	1420	235,52	4,86	3,11	1410	231,30
		23	-	-	-	-	-	-	-	-	5,96	2,35	1730	332,96	5,93	2,65	1720	330,12	5,90	2,94	1720	327,27	5,88	3,08	1710	324,96
	5	15	2,16	1,80	370	23,27	2,22	2,13	380	24,49	2,40	2,40	410	27,96	2,67	2,67	460	33,57	2,95	2,95	510	39,65	3,09	3,09	530	42,84
		17	2,92	1,75	500	38,95	2,91	2,05	500	38,67	2,89	2,35	500	38,32	2,84	2,63	490	37,23	2,97	2,97	510	40,13	3,09	3,09	530	42,94
		19	3,75	1,70	650	59,83	3,73	2,00	640	59,29	3,71	2,30	640	58,80	3,68	2,59	630	57,88	3,56	2,84	610	54,76	3,51	2,96	600	53,38
		21	-	-	-	-	4,62	1,94	800	85,76	4,60	2,24	790	85,05	4,58	2,54	790	84,33	4,52	2,82	780	82,57	4,46	2,94	770	80,63
		23	-	-	-	-	-	-	-	-	5,56	2,18	960	118,14	5,53	2,48	950	117,18	5,51	2,77	950	116,19	5,48	2,91	950	115,26
	7	15	1,81	1,64	220	8,02	1,99	1,99	240	10,55	2,22	2,22	270	13,50	2,49	2,49	310	16,70	2,77	2,77	340	19,97	2,91	2,91	360	21,68
		17	2,48	1,56	300	16,46	2,48	1,86	300	16,45	2,50	2,18	310	16,69	2,59	2,52	320	17,75	2,78	2,78	340	20,08	2,91	2,91	360	21,70
		19	3,33	1,52	410	27,18	3,31	1,81	410	26,88	3,29	2,11	400	26,69	3,27	2,41	400	26,37	3,19	2,68	390	25,26	3,15	2,81	390	24,81
		21	-	-	-	-	4,20	1,76	520	40,48	4,18	2,06	510	40,12	4,16	2,36	510	39,79	4,12	2,65	510	39,15	4,07	2,78	500	38,35
		23	-	-	-	-	-	-	-	-	5,14	2,00	630	57,19	5,12	2,30	630	56,72	5,09	2,60	630	56,25	5,07	2,74	620	55,88
7	3	15	1,97	1,72	570	47,32	2,05	2,05	590	50,66	2,29	2,29	660	61,53	2,57	2,57	740	74,91	2,85	2,85	820	89,32	2,98	2,98	860	96,91
		17	2,72	1,66	780	82,69	2,71	1,96	780	82,10	2,70	2,26	780	81,36	2,67	2,55	770	79,85	2,85	2,85	820	89,39	2,98	2,98	860	96,98
		19	3,55	1,61	1020	131,28	3,53	1,91	1020	129,96	3,51	2,21	1010	128,82	3,49	2,50	1010	127,20	3,36	2,75	970	119,23	3,30	2,87	950	115,62
		21	-	-	-	-	4,42	1,85	1280	192,79	4,40	2,15	1270	191,09	4,37	2,45	1270	189,43	4,32	2,73	1250	185,04	4,25	2,85	1230	180,05
		23	-	-	-	-	-	-	-	-	5,35	2,09	1550	271,13	5,33	2,39	1550	268,82	5,30	2,68	1540	266,34	5,27	2,82	1530	263,93
	5	15	1,64	1,57	280	14,43	1,85	1,85	320	17,61	2,12	2,12	360	22,18	2,39	2,39	410	27,36	2,67	2,67	460	32,95	2,81	2,81	480	35,89
		17	2,29	1,48	390	25,37	2,29	1,79	400	25,39	2,31	2,10	400	25,79	2,44	2,44	420	28,18	2,67	2,67	460	32,96	2,81	2,81	480	35,91
		19	3,13	1,43	540	43,23	3,11	1,73	540	42,72	3,10	2,03	530	42,39	3,08	2,33	530	42,00	3,00	2,60	520	40,15	2,96	2,73	510	39,24
		21	-	-	-	-	4,00	1,68	690	65,86	3,98	1,98	690	65,23	3,96	2,28	680	64,67	3,92	2,57	680	63,62	3,87	2,70	670	62,26
		23	-	-	-	-	-	-	-	-	4,93	1,92	850	94,64	4,91	2,22	850	93,83	4,89	2,51	840	93,02	4,87	2,66	840	92,35
	7	15	1,40	1,40	170	3,91	1,65	1,65	200	6,40	1,93	1,93	240	10,17	2,21	2,21	270	13,37	2,49	2,49	310	16,41	2,63	2,63	320	17,99
		17	1,80	1,28	220	8,52	1,88	1,62	230	9,53	2,03	1,98	250	11,39	2,24	2,24	280	13,61	2,49	2,49	310	16,42	2,63	2,63	320	18,00
		19	2,66	1,24	330	18,26	2,64	1,54	320	18,06	2,64	1,85	320	18,04	2,64	2,15	320	18,02	2,67	2,47	330	18,48	2,71	2,63	330	18,91
		21	-	-	-	-	3,55	1,50	440	29,89	3,53	1,80	430	29,55	3,51	2,10	430	29,31	3,49	2,39	430	28,96	3,45	2,53	420	28,48
		23	-	-	-	-	-	-	-	-	4,49	1,74	550	44,63	4,47	2,04	550	44,22	4,44	2,34	550	43,83	4,43	2,48	550	43,57
9	3	15	1,48	1,48	420	28,48	1,73	1,73	500	37,41	2,01	2,01	580	48,36	2,29	2,29	660	60,43	2,57	2,57	740	73,57	2,70	2,70	780	80,53
		17	2,09	1,39	600	51,56	2,09	1,70	600	51,73	2,12	2,02	610	52,76	2,29	2,29	660	60,48	2,57	2,57	740	73,61	2,71	2,71	780	80,58
		19	2,92	1,35	840	92,16	2,90	1,65	840	90,92	2,89	1,95	830	90,21	2,87	2,25	830	89,37	2,82	2,53	810	86,44	2,76	2,65	800	83,67
		21	-	-	-	-	3,79	1,59	1090	144,89	3,76	1,89	1090	143,38	3,74	2,19	1080	142,07	3,72	2,48	1070	140,25	3,67	2,61	1060	137,04
		23	-	-	-	-	-	-	-	-	4,72	1,83	1370	213,44	4,69	2,13	1360	211,49	4,67	2,43	1350	209,60	4,65	2,57	1350	208,04
	5	15	1,27	1,27	220	8,46	1,55	1,55	270	12,87	1,83	1,83	320	17,13	2,11	2,11	360	21,78	2,39	2,39	410	26,87	2,53	2,53	440	29,56
		17	1,62	1,21	280	13,87	1,70	1,55	290	15,10	1,87	1,87	320	17,77	2,11	2,11	360	21,79	2,39	2,39	410	26,88	2,53	2,53	440	29,58
		19	2,46	1,16	420	28,16	2,44	1,47	420	27,82	2,44	1,77	420	27,81	2,44	2,08	420	27,78	2,50	2,40	430	29,03	2,55	2,55	440	30,02
		21	-	-	-	-	3,34	1,42	580	47,62	3,32	1,72	570	47,02	3,30	2,02	570	46,63	3,28	2,31	570	46,19	3,25	2,45	560	45,45
		23	-	-	-	-	-	-	-	-	4,27	1,66	740	72,72	4,25	1,96	730	72,00	4,23	2,26	730	71,36	4,21	2,40	730	70,96
	7	15	1,07	1,07	130	2,68	1,36	1,36	170	3,71	1,65	1,65	200	6,85	1,93	1,93	240	10,29	2,21	2,21	270	13,18	2,35	2,35	290	14,63
		17	1,21	1,05	150	3,04	1,43	1,43	180	4,28	1,67	1,67	210	7,10	1,93	1,93	240	10,29	2,21	2,21	270	13,19	2,35	2,35	290	14,64
		19	1,92	0,96	240	10,20	1,92	1,27	240	10,20	1,97	1,59	240	10,67	2,10	1,95	260	12,02	2,27	2,27	280	13,80	2,36	2,36	290	14,75
		21	-	-	-	-	2,84	1,23	350	20,07	2,82	1,53	350	19,84	2,81	1,84	350	19,81	2,81	2,14	350	19,75	2,80	2,28	340	19,60
		23	-	-	-	-	-	-	-	-	3,80	1,48	470	32,97	3,77	1,78	460	32,57	3,75	2,08	460	32,30	3,74	2,23	460	32,16

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

011.0

EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
11	3	15	1,17	1,17	340	18,75	1,45	1,45	420	27,14	1,73	1,73	500	36,75	2,01	2,01	580	47,52	2,29	2,29	660	59,38	2,42	2,42	700	65,71
		17	1,42	1,13	410	26,26	1,51	1,47	440	29,26	1,73	1,73	500	36,78	2,01	2,01	580	47,53	2,29	2,29	660	59,41	2,43	2,43	700	65,74
		19	2,24	1,08	650	57,38	2,23	1,38	640	56,61	2,23	1,69	640	56,76	2,23	1,99	640	56,75	2,32	2,32	670	60,79	2,43	2,43	700	65,92
		21	-	-	-	-	3,12	1,34	900	101,77	3,09	1,63	890	100,31	3,08	1,93	890	99,46	3,06	2,23	880	98,51	3,04	2,37	880	97,57
		23	-	-	-	-	-	-	-	-	4,04	1,58	1170	160,44	4,02	1,87	1160	158,69	4,00	2,17	1160	157,18	3,99	2,32	1150	156,44
	5	15	0,98	0,98	170	3,77	1,26	1,26	220	8,61	1,55	1,55	270	12,67	1,83	1,83	320	16,83	2,11	2,11	360	21,40	2,25	2,25	390	23,85
		17	1,06	0,99	180	5,02	1,29	1,29	220	8,95	1,55	1,55	270	12,68	1,83	1,83	320	16,83	2,11	2,11	360	21,41	2,25	2,25	390	23,86
		19	1,73	0,89	300	15,24	1,73	1,20	300	15,26	1,78	1,52	310	15,97	1,92	1,88	330	18,22	2,12	2,12	370	21,58	2,25	2,25	390	23,87
		21	-	-	-	-	2,62	1,15	450	30,96	2,61	1,45	450	30,59	2,60	1,76	450	30,57	2,60	2,06	450	30,50	2,59	2,21	450	30,33
		23	-	-	-	-	-	-	-	-	3,57	1,40	620	52,61	3,55	1,70	610	51,91	3,53	2,00	610	51,45	3,52	2,15	610	51,25
	7	15	-	-	-	-	1,07	1,07	130	2,54	1,36	1,36	170	3,87	1,65	1,65	200	7,22	1,93	1,93	240	10,24	2,07	2,07	260	11,60
		17	-	-	-	-	1,07	1,07	130	2,55	1,36	1,36	170	3,88	1,65	1,65	200	7,23	1,93	1,93	240	10,25	2,07	2,07	260	11,60
		19	-	-	-	-	1,26	1,03	160	3,17	1,46	1,41	180	5,03	1,69	1,69	210	7,73	1,93	1,93	240	10,28	2,07	2,07	260	11,61
		21	-	-	-	-	2,05	0,95	250	11,40	2,05	1,26	250	11,39	2,07	1,57	260	11,58	2,18	1,91	270	12,68	2,25	2,09	280	13,35
		23	-	-	-	-	-	-	-	-	3,03	1,22	370	22,14	3,01	1,52	370	21,86	3,01	1,82	370	21,82	3,01	1,97	370	21,81
13	3	15	0,88	0,88	250	11,43	1,16	1,16	340	18,43	1,45	1,45	420	26,67	1,73	1,73	500	36,12	2,01	2,01	580	46,71	2,14	2,14	620	52,41
		17	0,90	0,90	260	11,96	1,16	1,16	340	18,43	1,45	1,45	420	26,69	1,73	1,73	500	36,13	2,01	2,01	580	46,72	2,15	2,15	620	52,43
		19	1,51	0,81	440	28,72	1,52	1,12	440	28,93	1,57	1,45	450	30,62	1,74	1,74	500	36,71	2,01	2,01	580	46,75	2,15	2,15	620	52,45
		21	-	-	-	-	2,39	1,07	690	63,19	2,37	1,37	680	62,36	2,37	1,68	680	62,48	2,37	1,98	680	62,46	2,36	2,13	680	62,02
		23	-	-	-	-	-	-	-	-	3,33	1,32	960	112,70	3,30	1,62	950	110,99	3,29	1,92	950	109,99	3,28	2,07	950	109,55
	5	15	-	-	-	-	0,98	0,98	170	4,03	1,26	1,26	220	8,69	1,55	1,55	270	12,47	1,83	1,83	320	16,54	1,97	1,97	340	18,73
		17	-	-	-	-	0,98	0,98	170	4,04	1,26	1,26	220	8,70	1,55	1,55	270	12,47	1,83	1,83	320	16,54	1,97	1,97	340	18,74
		19	-	-	-	-	1,10	0,98	190	6,09	1,31	1,31	230	9,27	1,55	1,55	270	12,53	1,83	1,83	320	16,55	1,97	1,97	340	18,75
		21	-	-	-	-	1,84	0,88	320	16,73	1,84	1,19	320	16,73	1,87	1,50	320	17,07	1,98	1,85	340	18,97	2,06	2,02	360	20,22
		23	-	-	-	-	-	-	-	-	2,80	1,14	480	34,21	2,78	1,44	480	33,73	2,78	1,75	480	33,71	2,78	1,90	480	33,71
	7	15	-	-	-	-	-	-	-	-	1,07	1,07	130	2,41	1,36	1,36	170	4,16	1,65	1,65	200	7,43	1,79	1,79	220	8,83
		17	-	-	-	-	-	-	-	-	1,07	1,07	130	2,41	1,36	1,36	170	4,16	1,65	1,65	200	7,43	1,79	1,79	220	8,83
		19	-	-	-	-	-	-	-	-	1,08	1,08	130	2,45	1,36	1,36	170	4,17	1,65	1,65	200	7,44	1,79	1,79	220	8,84
		21	-	-	-	-	-	-	-	-	1,31	1,02	160	3,73	1,51	1,38	190	5,90	1,72	1,72	210	8,21	1,83	1,83	230	9,24
		23	-	-	-	-	-	-	-	-	2,19	0,94	270	12,56	2,19	1,25	270	12,51	2,19	1,56	270	12,59	2,23	1,72	280	12,97
15	3	15	-	-	-	-	0,88	0,88	250	11,25	1,16	1,16	330	18,11	1,44	1,44	420	26,22	1,72	1,72	500	35,52	1,86	1,86	540	40,59
		17	-	-	-	-	0,88	0,88	250	11,25	1,16	1,16	330	18,12	1,45	1,45	420	26,24	1,72	1,72	500	35,53	1,86	1,86	540	40,60
		19	-	-	-	-	0,92	0,92	270	12,23	1,16	1,16	340	18,13	1,45	1,45	420	26,25	1,73	1,73	500	35,55	1,86	1,86	540	40,62
		21	-	-	-	-	1,61	0,80	460	31,44	1,62	1,12	470	31,78	1,64	1,43	470	32,52	1,78	1,78	510	37,49	1,88	1,88	540	41,12
		23	-	-	-	-	-	-	-	-	2,55	1,06	740	69,78	2,53	1,36	730	68,87	2,53	1,67	730	69,01	2,54	1,82	730	69,11
	5	15	-	-	-	-	-	-	-	-	0,97	0,97	170	4,38	1,26	1,26	220	8,65	1,55	1,55	270	12,26	1,69	1,69	290	14,20
		17	-	-	-	-	-	-	-	-	0,98	0,98	170	4,38	1,26	1,26	220	8,65	1,55	1,55	270	12,26	1,69	1,69	290	14,21
		19	-	-	-	-	-	-	-	-	0,98	0,98	170	4,39	1,26	1,26	220	8,66	1,55	1,55	270	12,27	1,69	1,69	290	14,22
		21	-	-	-	-	-	-	-	-	1,13	0,96	200	6,95	1,33	1,33	230	9,51	1,57	1,57	270	12,52	1,69	1,69	290	14,27
		23	-	-	-	-	-	-	-	-	1,97	0,87	340	18,42	1,96	1,18	340	18,36	1,97	1,49	340	18,50	2,01	1,65	350	19,15
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	1,07	1,07	130	2,31	1,36	1,36	170	4,49	1,50	1,50	190	6,09
		17	-	-	-	-	-	-	-	-	-	-	-	-	1,07	1,07	130	2,31	1,36	1,36	170	4,49	1,50	1,50	190	6,09
		19	-	-	-	-	-	-	-	-	-	-	-	-	1,07	1,07	130	2,32	1,36	1,36	170	4,49	1,50	1,50	190	6,09
		21	-	-	-	-	-	-	-	-	-	-	-	-	1,09	1,09	140	2,40	1,37	1,37	170	4,57	1,50	1,50	190	6,10
		23	-	-	-	-	-	-	-	-	-	-	-	-	1,37	1,00	170	4,67	1,55	1,36	190	6,63	1,66	1,54	200	7,62

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

017.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
5	3	15	3,37	2,59	970	62,68	3,35	2,97	960	61,97	3,37	3,37	970	62,87	3,72	3,72	1070	74,54	4,07	4,07	1180	87,51	4,25	4,25	1230	94,32
		17	4,37	2,53	1260	99,14	4,35	2,91	1260	98,26	4,30	3,28	1240	96,26	4,15	3,60	1200	90,44	4,18	4,00	1210	91,79	4,29	4,25	1240	96,02
		19	5,45	2,46	1590	147,33	5,42	2,85	1580	146,02	5,39	3,23	1570	144,58	5,30	3,58	1540	140,15	5,18	3,92	1510	134,46	5,18	4,11	1500	134,24
		21	-	-	-	-	6,59	2,78	1930	208,04	6,56	3,17	1920	206,23	6,52	3,54	1910	203,94	6,43	3,90	1890	199,16	6,37	4,06	1870	195,49
		23	-	-	-	-	-	-	-	-	7,81	3,09	2300	283,15	7,78	3,47	2290	280,94	7,74	3,85	2280	278,41	7,70	4,03	2270	276,42
	5	15	2,87	2,36	490	19,48	2,93	2,78	500	20,20	3,14	3,14	540	22,71	3,49	3,49	600	27,28	3,85	3,85	660	32,23	4,03	4,03	690	34,82
		17	3,87	2,30	670	32,52	3,86	2,69	660	32,27	3,82	3,07	660	31,80	3,73	3,41	640	30,43	3,90	3,88	670	32,92	4,04	4,04	700	35,07
		19	4,96	2,24	850	49,90	4,93	2,63	850	49,44	4,91	3,01	850	49,00	4,84	3,38	830	47,90	4,68	3,69	810	45,08	4,65	3,87	800	44,67
		21	-	-	-	-	6,10	2,56	1050	71,54	6,07	2,95	1050	70,94	6,04	3,33	1040	70,25	5,94	3,68	1030	68,37	5,87	3,84	1010	66,82
		23	-	-	-	-	-	-	-	-	7,32	2,88	1270	98,63	7,29	3,26	1260	97,82	7,25	3,64	1250	96,87	7,21	3,82	1250	96,05
	7	15	2,41	2,15	300	8,06	2,63	2,63	320	9,36	2,91	2,91	360	11,14	3,27	3,27	400	13,59	3,63	3,63	450	16,21	3,81	3,81	470	17,59
		17	3,32	2,06	410	13,89	3,31	2,45	410	13,86	3,32	2,85	410	13,89	3,40	3,27	420	14,51	3,65	3,65	450	16,40	3,81	3,81	470	17,65
		19	4,43	2,01	540	22,74	4,40	2,40	540	22,50	4,38	2,78	540	22,32	4,33	3,16	530	21,94	4,20	3,49	520	20,81	4,17	3,67	510	20,52
		21	-	-	-	-	5,57	2,34	690	33,80	5,55	2,72	680	33,50	5,52	3,10	680	33,20	5,45	3,47	670	32,47	5,36	3,63	660	31,61
		23	-	-	-	-	-	-	-	-	6,80	2,66	840	47,71	6,77	3,04	830	47,31	6,73	3,42	830	46,87	6,70	3,60	820	46,46
7	3	15	2,61	2,24	750	39,61	2,69	2,67	770	41,71	2,99	2,99	860	50,27	3,35	3,35	970	61,27	3,71	3,71	1070	73,14	3,88	3,88	1120	79,40
		17	3,60	2,18	1040	69,30	3,58	2,57	1030	68,76	3,56	2,95	1030	67,97	3,47	3,30	1000	65,15	3,71	3,71	1070	73,20	3,89	3,89	1120	79,47
		19	4,68	2,12	1360	110,38	4,65	2,50	1350	109,27	4,63	2,89	1340	108,27	4,57	3,26	1330	105,98	4,39	3,57	1270	98,44	4,36	3,75	1260	97,23
		21	-	-	-	-	5,81	2,44	1700	163,09	5,78	2,82	1690	161,59	5,75	3,20	1680	159,96	5,65	3,55	1650	155,00	5,57	3,71	1620	150,80
		23	-	-	-	-	-	-	-	-	7,03	2,75	2070	231,28	7,00	3,14	2060	229,20	6,96	3,51	2050	226,65	6,92	3,69	2040	224,40
	5	15	2,18	2,06	380	12,01	2,43	2,43	420	14,40	2,77	2,77	480	18,03	3,13	3,13	540	22,23	3,49	3,49	600	26,77	3,67	3,67	630	29,16
		17	3,06	1,95	530	21,32	3,05	2,34	530	21,29	3,06	2,74	530	21,40	3,18	3,18	550	22,87	3,49	3,49	600	26,79	3,67	3,67	630	29,18
		19	4,15	1,90	720	36,14	4,13	2,28	710	35,73	4,11	2,67	710	35,44	4,07	3,05	700	34,90	3,94	3,38	680	32,96	3,89	3,55	670	32,32
		21	-	-	-	-	5,29	2,22	910	55,02	5,26	2,61	910	54,50	5,23	2,99	900	54,00	5,17	3,35	890	52,77	5,07	3,51	880	51,15
		23	-	-	-	-	-	-	-	-	6,51	2,54	1130	79,12	6,48	2,92	1120	78,43	6,44	3,30	1110	77,66	6,41	3,48	1110	76,90
	7	15	1,86	1,86	230	4,77	2,18	2,18	270	6,67	2,54	2,54	310	8,70	2,90	2,90	360	10,93	3,26	3,26	400	13,33	3,44	3,44	420	14,60
		17	2,43	1,69	300	8,03	2,51	2,12	310	8,54	2,69	2,59	330	9,62	2,93	2,93	360	11,09	3,26	3,26	400	13,34	3,44	3,44	420	14,61
		19	3,56	1,65	440	15,42	3,53	2,04	430	15,24	3,53	2,43	430	15,19	3,51	2,82	430	15,06	3,52	3,21	430	15,13	3,57	3,42	440	15,51
		21	-	-	-	-	4,72	1,99	580	25,05	4,69	2,38	580	24,77	4,67	2,76	570	24,57	4,62	3,13	570	24,12	4,56	3,30	560	23,57
		23	-	-	-	-	-	-	-	-	5,96	2,31	730	37,33	5,92	2,70	730	36,99	5,89	3,08	720	36,64	5,86	3,26	720	36,35
9	3	15	1,94	1,94	560	23,47	2,26	2,26	650	30,50	2,63	2,63	760	39,46	2,99	2,99	860	49,35	3,34	3,34	970	60,15	3,52	3,52	1020	65,87
		17	2,77	1,83	800	43,35	2,78	2,23	800	43,40	2,79	2,62	800	43,75	2,99	2,99	860	49,47	3,35	3,35	970	60,19	3,52	3,52	1020	65,92
		19	3,86	1,78	1120	77,37	3,83	2,16	1110	76,38	3,81	2,55	1100	75,74	3,79	2,93	1090	74,85	3,66	3,27	1060	70,64	3,61	3,44	1040	68,80
		21	-	-	-	-	4,99	2,10	1450	122,19	4,96	2,48	1440	120,91	4,93	2,87	1430	119,77	4,87	3,23	1420	117,13	4,77	3,39	1390	112,93
		23	-	-	-	-	-	-	-	-	6,20	2,41	1820	181,24	6,17	2,80	1810	179,53	6,14	3,18	1800	177,69	6,10	3,36	1790	175,70
	5	15	1,68	1,68	290	7,59	2,04	2,04	350	10,51	2,40	2,40	410	13,92	2,76	2,76	480	17,70	3,12	3,12	540	21,82	3,30	3,30	570	24,01
		17	2,17	1,59	370	11,73	2,27	2,02	390	12,60	2,47	2,47	430	14,59	2,77	2,77	480	17,71	3,13	3,13	540	21,84	3,30	3,30	570	24,03
		19	3,28	1,55	570	23,72	3,26	1,93	560	23,42	3,25	2,33	560	23,37	3,24	2,71	560	23,22	3,28	3,12	560	23,69	3,34	3,33	580	24,47
		21	-	-	-	-	4,43	1,88	760	39,88	4,40	2,26	760	39,40	4,38	2,65	760	39,07	4,34	3,02	750	38,46	4,28	3,19	740	37,57
		23	-	-	-	-	-	-	-	-	5,65	2,20	980	60,88	5,62	2,58	970	60,28	5,59	2,96	970	59,71	5,56	3,15	960	59,24
	7	15	1,42	1,42	170	2,12	1,79	1,79	220	4,46	2,17	2,17	270	6,54	2,53	2,53	310	8,55	2,90	2,90	360	10,72	3,08	3,08	380	11,88
		17	1,63	1,38	200	3,43	1,90	1,88	230	5,13	2,20	2,20	270	6,71	2,53	2,53	310	8,55	2,90	2,90	360	10,73	3,08	3,08	380	11,89
		19	2,60	1,28	320	8,87	2,59	1,68	320	8,83	2,64	2,09	320	9,13	2,79	2,54	340	10,02	2,98	2,98	370	11,25	3,10	3,10	380	12,00
		21	-	-	-	-	3,80	1,64	470	16,98	3,77	2,02	460	16,77	3,77	2,42	460	16,71	3,74	2,80	460	16,56	3,71	2,98	460	16,27
		23	-	-	-	-	-	-	-	-	5,05	1,97	620	27,68	5,02	2,36	620	27,36	4,99	2,74	610	27,12	4,97	2,93	610	26,95

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

017.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
11	3	15	1,53	1,53	440	15,27	1,89	1,89	540	22,11	2,26	2,26	650	29,95	2,62	2,62	760	38,76	2,98	2,98	860	48,48	3,16	3,16	910	53,67
		17	1,89	1,48	540	22,08	2,00	1,92	580	24,29	2,26	2,26	650	30,02	2,62	2,62	760	38,77	2,98	2,98	860	48,50	3,16	3,16	910	53,70
		19	2,98	1,43	860	48,40	2,95	1,82	850	47,73	2,95	2,21	850	47,74	2,95	2,60	850	47,47	3,04	3,02	880	50,04	3,16	3,16	910	53,73
		21	-	-	-	-	4,12	1,76	1190	85,65	4,09	2,14	1180	84,49	4,07	2,53	1180	83,74	4,04	2,91	1170	82,73	4,00	3,09	1160	81,32
		23	-	-	-	-	-	-	-	-	5,33	2,07	1550	135,73	5,30	2,46	1540	134,27	5,27	2,84	1540	132,96	5,25	3,03	1530	132,12
	5	15	1,29	1,29	220	4,59	1,66	1,66	290	7,34	2,03	2,03	350	10,32	2,40	2,40	410	13,67	2,76	2,76	480	17,38	2,94	2,94	510	19,37
		17	1,41	1,30	240	5,54	1,70	1,70	290	7,64	2,03	2,03	350	10,32	2,40	2,40	410	13,68	2,76	2,76	480	17,39	2,94	2,94	510	19,38
		19	2,32	1,18	400	12,94	2,32	1,58	400	12,90	2,37	1,99	410	13,41	2,54	2,44	440	15,04	2,78	2,78	480	17,62	2,94	2,94	510	19,39
		21	-	-	-	-	3,50	1,53	600	26,16	3,48	1,92	600	25,81	3,47	2,31	600	25,75	3,46	2,69	600	25,57	3,43	2,88	590	25,24
		23	-	-	-	-	-	-	-	-	4,74	1,86	820	44,14	4,70	2,24	810	43,59	4,68	2,63	810	43,20	4,67	2,82	810	42,99
	7	15	-	-	-	-	1,41	1,41	170	2,23	1,79	1,79	220	4,54	2,16	2,16	270	6,43	2,53	2,53	310	8,39	2,71	2,71	330	9,44
		17	-	-	-	-	1,43	1,43	180	2,32	1,79	1,79	220	4,54	2,16	2,16	270	6,43	2,53	2,53	310	8,40	2,71	2,71	330	9,44
		19	-	-	-	-	1,69	1,36	210	4,01	1,95	1,84	240	5,38	2,23	2,23	270	6,79	2,54	2,54	310	8,45	2,71	2,71	330	9,45
		21	-	-	-	-	2,77	1,27	340	9,72	2,77	1,67	340	9,73	2,78	2,07	340	9,84	2,90	2,50	360	10,58	2,98	2,72	370	11,06
		23	-	-	-	-	-	-	-	-	4,06	1,62	500	18,75	4,03	2,01	500	18,51	4,02	2,40	500	18,45	4,02	2,59	490	18,41
13	3	15	1,15	1,15	330	9,32	1,52	1,52	440	15,00	1,89	1,89	540	21,71	2,25	2,25	650	29,43	2,62	2,62	750	38,08	2,79	2,79	810	42,74
		17	1,19	1,19	340	9,84	1,52	1,52	440	15,00	1,89	1,89	540	21,73	2,25	2,25	650	29,44	2,62	2,62	750	38,10	2,80	2,80	810	42,77
		19	2,02	1,07	580	24,32	2,02	1,47	580	24,32	2,08	1,89	600	25,64	2,29	2,29	660	30,13	2,62	2,62	750	38,12	2,80	2,80	810	42,79
		21	-	-	-	-	3,18	1,41	920	53,51	3,15	1,80	910	52,71	3,15	2,19	910	52,71	3,14	2,58	910	52,40	3,11	2,77	900	51,64
		23	-	-	-	-	-	-	-	-	4,40	1,74	1280	95,12	4,37	2,12	1270	93,76	4,34	2,51	1260	92,89	4,33	2,70	1260	92,43
	5	15	-	-	-	-	1,28	1,28	220	4,61	1,66	1,66	290	7,21	2,03	2,03	350	10,13	2,39	2,39	410	13,43	2,57	2,57	440	15,21
		17	-	-	-	-	1,28	1,28	220	4,61	1,66	1,66	290	7,22	2,03	2,03	350	10,14	2,39	2,39	410	13,43	2,57	2,57	440	15,22
		19	-	-	-	-	1,46	1,28	250	5,80	1,73	1,73	300	7,75	2,04	2,04	350	10,23	2,39	2,39	410	13,44	2,58	2,58	440	15,22
		21	-	-	-	-	2,47	1,17	430	14,18	2,48	1,57	430	14,24	2,50	1,97	430	14,44	2,63	2,40	450	15,75	2,71	2,63	470	16,65
		23	-	-	-	-	-	-	-	-	3,74	1,51	650	28,93	3,71	1,90	640	28,54	3,71	2,29	640	28,46	3,70	2,48	640	28,41
	7	15	-	-	-	-	-	-	-	-	1,41	1,41	170	2,41	1,79	1,79	220	4,54	2,16	2,16	270	6,32	2,34	2,34	290	7,26
		17	-	-	-	-	-	-	-	-	1,41	1,41	170	2,41	1,79	1,79	220	4,54	2,16	2,16	270	6,33	2,34	2,34	290	7,26
		19	-	-	-	-	-	-	-	-	1,44	1,44	180	2,60	1,79	1,79	220	4,56	2,16	2,16	270	6,33	2,35	2,35	290	7,27
		21	-	-	-	-	-	-	-	-	1,77	1,33	220	4,44	2,01	1,81	250	5,59	2,28	2,28	280	6,93	2,42	2,42	300	7,64
		23	-	-	-	-	-	-	-	-	2,95	1,25	360	10,69	2,95	1,65	360	10,71	2,96	2,05	360	10,75	2,99	2,25	370	10,97
15	3	15	-	-	-	-	1,15	1,15	330	9,16	1,52	1,52	440	14,73	1,89	1,89	540	21,34	2,25	2,25	650	28,92	2,43	2,43	700	33,06
		17	-	-	-	-	1,15	1,15	330	9,16	1,52	1,52	440	14,74	1,89	1,89	540	21,35	2,25	2,25	650	28,94	2,43	2,43	700	33,08
		19	-	-	-	-	1,22	1,19	350	10,10	1,52	1,52	440	14,79	1,89	1,89	540	21,36	2,25	2,25	650	28,95	2,43	2,43	700	33,10
		21	-	-	-	-	2,15	1,06	620	26,66	2,16	1,46	620	26,89	2,18	1,86	630	27,45	2,34	2,31	670	30,97	2,46	2,46	710	33,67
		23	-	-	-	-	-	-	-	-	3,39	1,40	980	59,30	3,37	1,78	970	58,41	3,36	2,18	970	58,38	3,36	2,37	970	58,33
	5	15	-	-	-	-	-	-	-	-	1,28	1,28	220	4,57	1,66	1,66	290	7,09	2,02	2,02	350	9,96	2,21	2,21	380	11,53
		17	-	-	-	-	-	-	-	-	1,28	1,28	220	4,57	1,66	1,66	290	7,09	2,03	2,03	350	9,96	2,21	2,21	380	11,54
		19	-	-	-	-	-	-	-	-	1,28	1,28	220	4,58	1,66	1,66	290	7,09	2,03	2,03	350	9,97	2,21	2,21	380	11,54
		21	-	-	-	-	-	-	-	-	1,52	1,26	260	6,11	1,77	1,73	310	7,92	2,06	2,06	360	10,26	2,22	2,22	380	11,62
		23	-	-	-	-	-	-	-	-	2,64	1,16	460	15,60	2,64	1,55	460	15,68	2,65	1,95	460	15,76	2,69	2,16	460	16,14
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	1,41	1,41	170	2,58	1,79	1,79	220	4,50	1,97	1,97	240	5,34
		17	-	-	-	-	-	-	-	-	-	-	-	-	1,41	1,41	170	2,58	1,79	1,79	220	4,50	1,97	1,97	240	5,34
		19	-	-	-	-	-	-	-	-	-	-	-	-	1,41	1,41	170	2,58	1,79	1,79	220	4,50	1,97	1,97	240	5,35
		21	-	-	-	-	-	-	-	-	-	-	-	-	1,46	1,46	180	2,87	1,80	1,80	220	4,57	1,98	1,98	240	5,36
		23	-	-	-	-	-	-	-	-	-	-	-	-	1,85	1,31	230	4,75	2,08	1,77	260	5,82	2,21	2,01	270	6,47

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

021.0																												
EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30			
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]
5	3	15	3,67	2,84	1060	65,12	3,66	3,27	1050	64,60	3,74	3,74	1080	67,16	4,10	4,10	1180	79,11	4,49	4,49	1300	93,05	4,69	4,69	1360	100,38
		17	4,77	2,77	1380	103,37	4,74	3,20	1370	102,49	4,72	3,63	1370	101,50	4,59	4,00	1330	96,55	4,57	4,42	1320	95,91	4,71	4,70	1360	101,05
		19	5,95	2,69	1740	154,24	5,92	3,12	1730	152,88	5,90	3,55	1720	151,57	5,83	3,96	1700	148,67	5,66	4,31	1650	140,67	5,63	4,51	1640	139,26
		21	-	-	-	-	7,20	3,04	2120	218,77	7,17	3,46	2110	216,89	7,13	3,89	2100	214,94	7,05	4,29	2070	210,38	6,98	4,47	2050	206,62
		23	-	-	-	-	-	-	-	-	8,54	3,37	2520	295,19	8,50	3,80	2500	292,76	8,46	4,22	2490	290,38	8,42	4,42	2480	288,46
	5	15	3,12	2,59	540	20,05	3,21	3,07	550	21,05	3,47	3,47	600	24,02	3,85	3,85	660	28,78	4,25	4,25	730	34,05	4,45	4,45	760	36,81
		17	4,22	2,52	730	33,60	4,20	2,95	720	33,36	4,18	3,38	720	33,09	4,12	3,79	710	32,29	4,28	4,28	740	34,48	4,45	4,45	770	36,89
		19	5,41	2,45	930	51,74	5,38	2,88	930	51,25	5,35	3,31	920	50,82	5,31	3,73	910	50,12	5,16	4,09	890	47,68	5,07	4,27	870	46,17
		21	-	-	-	-	6,66	2,80	1150	74,33	6,62	3,22	1140	73,70	6,59	3,65	1140	73,08	6,52	4,06	1130	71,76	6,44	4,24	1110	70,10
		23	-	-	-	-	-	-	-	-	8,00	3,14	1380	102,72	7,96	3,56	1380	101,87	7,92	3,99	1370	101,03	7,89	4,19	1360	100,27
	7	15	2,63	2,38	320	8,35	2,88	2,88	350	9,76	3,21	3,21	390	11,72	3,60	3,60	440	14,29	4,00	4,00	490	17,08	4,20	4,20	520	18,54
		17	3,60	2,25	440	14,24	3,60	2,69	440	14,23	3,63	3,14	440	14,41	3,75	3,63	460	15,31	4,02	4,02	490	17,18	4,20	4,20	520	18,56
		19	4,82	2,19	590	23,46	4,79	2,62	590	23,20	4,77	3,05	590	23,02	4,74	3,48	580	22,78	4,63	3,87	570	21,91	4,58	4,06	560	21,48
		21	-	-	-	-	6,08	2,55	750	34,95	6,04	2,98	740	34,63	6,01	3,40	740	34,34	5,96	3,82	730	33,83	5,90	4,01	720	33,24
		23	-	-	-	-	-	-	-	-	7,42	2,89	910	49,42	7,38	3,32	910	49,01	7,35	3,75	900	48,60	7,32	3,95	900	48,30
7	3	15	2,84	2,47	820	40,91	2,95	2,95	850	43,77	3,30	3,30	950	53,20	3,70	3,70	1070	64,95	4,09	4,09	1180	77,70	4,29	4,29	1240	84,42
		17	3,92	2,39	1130	71,92	3,90	2,82	1130	71,40	3,88	3,25	1120	70,80	3,86	3,68	1110	69,98	4,09	4,09	1180	77,75	4,29	4,29	1240	84,49
		19	5,10	2,31	1480	115,11	5,07	2,74	1470	113,91	5,05	3,17	1470	112,88	5,02	3,60	1460	111,73	4,86	3,97	1410	105,56	4,75	4,13	1380	101,32
		21	-	-	-	-	6,34	2,66	1860	170,73	6,31	3,09	1850	169,17	6,28	3,52	1840	167,67	6,21	3,92	1820	164,36	6,12	4,10	1790	159,86
		23	-	-	-	-	-	-	-	-	7,68	3,00	2260	241,66	7,64	3,43	2250	239,65	7,60	3,85	2240	237,59	7,57	4,05	2230	235,63
	5	15	2,38	2,27	410	12,44	2,67	2,67	460	15,09	3,05	3,05	520	18,98	3,45	3,45	590	23,44	3,85	3,85	660	28,27	4,05	4,05	700	30,81
		17	3,32	2,13	570	21,88	3,32	2,58	570	21,90	3,35	3,03	580	22,22	3,52	3,52	610	24,28	3,85	3,85	660	28,28	4,05	4,05	700	30,83
		19	4,53	2,07	780	37,37	4,49	2,50	770	36,90	4,47	2,93	770	36,61	4,45	3,36	770	36,30	4,35	3,75	750	34,94	4,30	3,95	740	34,15
		21	-	-	-	-	5,77	2,42	990	57,02	5,74	2,85	990	56,46	5,71	3,28	980	55,96	5,66	3,70	980	55,18	5,60	3,89	970	54,15
		23	-	-	-	-	-	-	-	-	7,10	2,76	1230	82,15	7,07	3,19	1220	81,43	7,03	3,62	1220	80,73	7,01	3,82	1210	80,21
	7	15	2,04	2,04	250	5,27	2,40	2,40	290	7,03	2,80	2,80	340	9,13	3,20	3,20	390	11,48	3,60	3,60	440	14,03	3,80	3,80	470	15,38
		17	2,63	1,86	320	8,23	2,74	2,34	340	8,79	2,95	2,86	360	10,01	3,24	3,24	400	11,70	3,60	3,60	440	14,04	3,80	3,80	470	15,39
		19	3,86	1,80	470	15,78	3,83	2,23	470	15,60	3,83	2,67	470	15,58	3,83	3,11	470	15,56	3,88	3,56	480	15,96	3,94	3,80	480	16,35
		21	-	-	-	-	5,14	2,17	630	25,83	5,11	2,60	630	25,52	5,08	3,03	620	25,31	5,05	3,45	620	25,03	5,01	3,65	620	24,68
		23	-	-	-	-	-	-	-	-	6,49	2,52	800	38,57	6,45	2,95	790	38,21	6,42	3,37	790	37,87	6,40	3,58	790	37,66
9	3	15	2,13	2,13	610	24,48	2,50	2,50	720	32,18	2,90	2,90	830	41,72	3,30	3,30	950	52,28	3,69	3,69	1070	63,83	3,89	3,89	1120	69,97
		17	3,01	2,01	870	44,61	3,02	2,45	870	44,78	3,05	2,90	880	45,70	3,30	3,30	950	52,33	3,69	3,69	1070	63,86	3,89	3,89	1120	70,02
		19	4,21	1,94	1220	80,38	4,17	2,37	1210	79,22	4,15	2,80	1200	78,58	4,13	3,23	1200	77,90	4,08	3,64	1180	76,06	4,01	3,83	1160	73,84
		21	-	-	-	-	5,44	2,29	1580	127,39	5,41	2,72	1570	125,99	5,38	3,15	1570	124,79	5,35	3,57	1560	123,49	5,29	3,76	1540	121,17
		23	-	-	-	-	-	-	-	-	6,77	2,63	1990	189,71	6,73	3,06	1980	187,91	6,70	3,48	1970	186,17	6,67	3,69	1960	185,01
	5	15	1,84	1,84	320	7,92	2,24	2,24	390	11,03	2,65	2,65	460	14,64	3,05	3,05	520	18,65	3,45	3,45	590	23,03	3,65	3,65	630	25,36
		17	2,36	1,75	410	12,02	2,47	2,23	420	12,99	2,71	2,71	470	15,25	3,05	3,05	520	18,66	3,45	3,45	590	23,04	3,65	3,65	630	25,37
		19	3,56	1,68	610	24,31	3,53	2,12	610	24,01	3,53	2,56	610	24,01	3,53	2,99	610	23,99	3,62	3,46	620	25,09	3,70	3,70	640	25,99
		21	-	-	-	-	4,83	2,05	830	41,20	4,79	2,48	830	40,66	4,77	2,91	820	40,31	4,74	3,33	820	39,96	4,71	3,54	810	39,46
		23	-	-	-	-	-	-	-	-	6,16	2,39	1060	63,04	6,12	2,82	1060	62,39	6,09	3,25	1050	61,82	6,07	3,46	1050	61,51
	7	15	1,55	1,55	190	2,66	1,97	1,97	240	4,93	2,39	2,39	290	6,87	2,79	2,79	340	8,98	3,20	3,20	390	11,28	3,40	3,40	420	12,51
		17	1,78	1,53	220	3,97	2,08	2,08	260	5,43	2,42	2,42	300	7,02	2,79	2,79	340	8,98	3,20	3,20	390	11,29	3,40	3,40	420	12,52
		19	2,81	1,40	350	9,06	2,81	1,84	350	9,04	2,86	2,30	350	9,34	3,05	2,81	370	10,40	3,29	3,29	400	11,85	3,42	3,42	420	12,69
		21	-	-	-	-	4,12	1,78	510	17,37	4,09	2,21	500	17,15	4,08	2,65	500	17,12	4,08	3,09	500	17,08	4,06	3,30	500	16,98
		23	-	-	-	-	-	-	-	-	5,49	2,15	680	28,52	5,45	2,57	670	28,16	5,43	3,00	670	27,91	5,41	3,22	670	27,80

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Cooling performance

021.0

EWT	ΔT	Ta (W.B.)	Ta (D.B.)																									
			21				23				25				27				29				30					
			TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP	TC	SC	WF	WDP		
[°C]	[°C]	[°C]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]	[kW]	[kW]	[l/h]	[kPa]		
11	3	15	1,68	1,68	480	16,05	2,09	2,09	600	23,30	2,49	2,49	720	31,63	2,89	2,89	830	41,01	3,29	3,29	950	51,40	3,49	3,49	1010	56,96		
		17	2,06	1,63	590	22,73	2,19	2,12	630	25,20	2,49	2,49	720	31,66	2,89	2,89	830	41,03	3,29	3,29	950	51,42	3,49	3,49	1010	56,98		
		19	3,23	1,56	930	49,70	3,20	1,99	920	49,04	3,21	2,43	930	49,19	3,21	2,87	930	49,26	3,34	3,34	960	52,71	3,49	3,49	1010	57,12		
		21	-	-	-	-	4,49	1,92	1300	88,93	4,45	2,35	1290	87,57	4,42	2,78	1280	86,79	4,40	3,21	1280	86,02	4,38	3,41	1270	85,27		
		23	-	-	-	-	-	-	-	-	5,81	2,26	1700	141,46	5,77	2,69	1690	139,83	5,74	3,12	1680	138,43	5,72	3,33	1670	137,78		
	5	15	1,42	1,42	240	4,96	1,83	1,83	320	7,70	2,24	2,24	390	10,84	2,64	2,64	460	14,39	3,04	3,04	520	18,33	3,24	3,24	560	20,44		
		17	1,54	1,44	270	5,77	1,87	1,87	320	7,95	2,24	2,24	390	10,85	2,64	2,64	460	14,40	3,04	3,04	520	18,34	3,24	3,24	560	20,45		
		19	2,52	1,29	430	13,22	2,52	1,74	430	13,24	2,58	2,20	440	13,75	2,78	2,71	480	15,67	3,06	3,06	530	18,52	3,25	3,25	560	20,47		
		21	-	-	-	-	3,80	1,67	650	26,80	3,77	2,10	650	26,42	3,76	2,54	650	26,40	3,76	2,97	650	26,37	3,75	3,18	650	26,24		
		23	-	-	-	-	-	-	-	-	5,15	2,03	890	45,57	5,11	2,45	880	44,93	5,09	2,88	880	44,52	5,07	3,10	880	44,35		
	7	15	-	-	-	-	1,55	1,55	190	2,83	1,97	1,97	240	4,88	2,38	2,38	290	6,76	2,79	2,79	340	8,82	2,99	2,99	370	9,93		
		17	-	-	-	-	1,56	1,56	190	2,90	1,97	1,97	240	4,89	2,38	2,38	290	6,76	2,79	2,79	340	8,83	2,99	2,99	370	9,94		
		19	-	-	-	-	1,85	1,50	230	4,33	2,13	2,04	260	5,59	2,45	2,45	300	7,08	2,80	2,80	340	8,87	2,99	2,99	370	9,94		
		21	-	-	-	-	3,00	1,39	370	9,93	2,99	1,83	370	9,90	3,01	2,27	370	10,03	3,17	2,76	390	10,94	3,27	3,01	400	11,51		
		23	-	-	-	-	-	-	-	-	4,40	1,77	540	19,20	4,36	2,19	540	18,90	4,36	2,63	540	18,87	4,36	2,85	540	18,86		
13	3	15	1,27	1,27	360	9,78	1,68	1,68	480	15,78	2,08	2,08	600	22,91	2,49	2,49	720	31,11	2,89	2,89	830	40,34	3,09	3,09	890	45,32		
		17	1,31	1,31	380	10,28	1,68	1,68	480	15,79	2,09	2,09	600	22,92	2,49	2,49	720	31,12	2,89	2,89	830	40,35	3,09	3,09	890	45,34		
		19	2,19	1,17	630	24,85	2,20	1,62	630	25,09	2,26	2,08	650	26,38	2,51	2,51	720	31,67	2,89	2,89	830	40,37	3,09	3,09	890	45,36		
		21	-	-	-	-	3,44	1,54	990	54,79	3,41	1,97	990	54,08	3,42	2,41	990	54,20	3,42	2,85	990	54,28	3,41	3,06	980	53,98		
		23	-	-	-	-	-	-	-	-	4,79	1,90	1390	98,69	4,75	2,32	1380	97,09	4,72	2,75	1370	96,16	4,71	2,97	1370	95,79		
	5	15	-	-	-	-	1,41	1,41	240	4,89	1,83	1,83	310	7,57	2,24	2,24	390	10,66	2,64	2,64	450	14,15	2,84	2,84	490	16,05		
		17	-	-	-	-	1,41	1,41	240	4,89	1,83	1,83	320	7,57	2,24	2,24	390	10,67	2,64	2,64	460	14,16	2,84	2,84	490	16,05		
		19	-	-	-	-	1,60	1,41	280	6,01	1,90	1,90	330	8,04	2,24	2,24	390	10,73	2,64	2,64	460	14,17	2,84	2,84	490	16,06		
		21	-	-	-	-	2,68	1,28	460	14,49	2,68	1,72	460	14,50	2,70	2,17	470	14,72	2,87	2,66	500	16,35	2,98	2,91	510	17,42		
		23	-	-	-	-	-	-	-	-	4,06	1,65	700	29,64	4,02	2,08	690	29,15	4,02	2,51	690	29,13	4,02	2,73	690	29,15		
	7	15	-	-	-	-	-	-	-	-	1,55	1,55	190	2,97	1,97	1,97	240	4,82	2,38	2,38	290	6,65	2,59	2,59	320	7,64		
		17	-	-	-	-	-	-	-	-	1,55	1,55	190	2,97	1,97	1,97	240	4,82	2,38	2,38	290	6,65	2,59	2,59	320	7,64		
		19	-	-	-	-	-	-	-	-	1,58	1,58	190	3,11	1,97	1,97	240	4,83	2,38	2,38	290	6,65	2,59	2,59	320	7,64		
		21	-	-	-	-	-	-	-	-	1,92	1,47	240	4,59	2,19	2,00	270	5,76	2,50	2,50	310	7,21	2,66	2,66	330	7,99		
		23	-	-	-	-	-	-	-	-	3,20	1,37	390	10,97	3,19	1,81	390	10,86	3,19	2,25	390	10,90	3,25	2,48	400	11,22		
15	3	15	-	-	-	-	1,27	1,27	360	9,62	1,68	1,68	480	15,52	2,08	2,08	600	22,54	2,48	2,48	720	30,61	2,68	2,68	770	35,02		
		17	-	-	-	-	1,27	1,27	360	9,62	1,68	1,68	480	15,53	2,08	2,08	600	22,55	2,48	2,48	720	30,62	2,68	2,68	770	35,04		
		19	-	-	-	-	1,34	1,32	380	10,53	1,68	1,68	480	15,53	2,08	2,08	600	22,56	2,48	2,48	720	30,63	2,68	2,68	770	35,05		
		21	-	-	-	-	2,32	1,16	670	27,25	2,34	1,61	670	27,54	2,36	2,05	680	28,04	2,57	2,56	740	32,40	2,71	2,71	780	35,54		
		23	-	-	-	-	-	-	-	-	3,67	1,52	1060	60,79	3,64	1,95	1050	59,78	3,64	2,39	1050	59,93	3,65	2,61	1060	60,06		
	5	15	-	-	-	-	-	-	-	-	1,41	1,41	240	4,82	1,83	1,83	310	7,44	2,23	2,23	390	10,49	2,44	2,44	420	12,16		
		17	-	-	-	-	-	-	-	-	1,41	1,41	240	4,82	1,83	1,83	310	7,45	2,23	2,23	390	10,49	2,44	2,44	420	12,16		
		19	-	-	-	-	-	-	-	-	1,41	1,41	240	4,82	1,83	1,83	320	7,45	2,23	2,23	390	10,50	2,44	2,44	420	12,17		
		21	-	-	-	-	-	-	-	-	1,65	1,39	280	6,27	1,93	1,91	330	8,19	2,27	2,27	390	10,74	2,44	2,44	420	12,22		
		23	-	-	-	-	-	-	-	-	2,87	1,27	490	16,07	2,85	1,70	490	15,93	2,86	2,14	490	15,99	2,91	2,38	500	16,52		
	7	15	-	-	-	-	-	-	-	-	-	-	-	-	1,55	1,55	190	3,04	1,97	1,97	240	4,74	2,18	2,18	270	5,61		
		17	-	-	-	-	-	-	-	-	-	-	-	-	1,55	1,55	190	3,04	1,97	1,97	240	4,74	2,18	2,18	270	5,62		
		19	-	-	-	-	-	-	-	-	-	-	-	-	1,55	1,55	190	3,04	1,97	1,97	240	4,75	2,18	2,18	270	5,62		
		21	-	-	-	-	-	-	-	-	-	-	-	-	1,59	1,59	200	3,24	1,98	1,98	240	4,80	2,18	2,18	270	5,63		
		23	-	-	-	-	-	-	-	-	-	-	-	-	2,01	1,45	250	4,87	2,26	1,96	280	5,98	2,41	2,22	300	6,68		

EWT = Exchanger water inlet temperature(°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TC = Total cooling capacity (kW)
SC = Sensible cooling capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Heating performance

007.0																
EWT	ΔT	Ta (D.B.)														
		16			18			20			22			24		
		TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP
[°C]	[°C]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]
70	5	6,02	1050	120,15	5,77	1010	111,33	5,51	960	102,86	5,26	920	94,75	5,01	880	86,99
	10	5,67	500	32,43	5,41	470	29,94	5,16	450	27,55	4,91	430	25,27	4,66	410	23,09
	15	5,31	310	14,48	5,05	290	13,31	4,80	280	12,18	4,55	260	11,11	4,30	250	10,09
65	5	5,43	950	101,74	5,18	900	93,55	4,92	860	85,72	4,67	820	78,25	4,43	770	71,13
	10	5,08	440	27,24	4,82	420	24,93	4,57	400	22,73	4,32	380	20,63	4,07	360	18,63
	15	4,71	270	12,03	4,45	260	10,94	4,20	240	9,91	3,95	230	8,92	3,70	210	7,99
60	5	4,84	840	84,52	4,59	800	76,98	4,34	760	69,81	4,09	710	62,99	3,84	670	56,52
	10	4,48	390	22,39	4,23	370	20,27	3,98	350	18,26	3,73	330	16,35	3,49	300	14,54
	15	4,11	240	9,74	3,85	220	8,74	3,60	210	7,80	3,35	190	6,91	3,11	180	6,07
55	5	4,25	740	68,51	4,00	700	61,65	3,75	650	55,15	3,50	610	49,01	3,26	570	43,23
	10	3,89	340	17,89	3,64	320	15,96	3,39	290	14,15	3,14	270	12,43	2,90	250	10,83
	15	3,50	200	7,61	3,25	190	6,72	3,00	170	5,87	2,75	160	5,06	2,50	140	4,29
50	5	3,65	640	53,81	3,41	590	47,64	3,16	550	41,84	2,92	510	36,41	2,68	470	31,33
	10	3,29	290	13,76	3,04	260	12,04	2,79	240	10,42	2,55	220	8,92	2,30	200	7,52
	15	2,89	170	5,65	2,64	150	4,79	2,39	140	3,85	2,14	120	2,81	1,89	110	1,90
45	5	3,06	530	40,48	2,82	490	35,04	2,57	450	29,97	2,33	400	25,28	2,09	360	20,96
	10	2,69	230	10,03	2,44	210	8,52	2,20	190	7,12	1,95	170	5,82	1,70	150	4,49
	15	2,28	130	3,06	2,02	120	2,15	1,77	100	1,66	1,51	90	1,40	1,24	70	1,15
40	5	2,47	430	28,62	2,23	390	23,95	1,98	340	19,66	1,74	300	15,76	1,50	260	12,25
	10	2,08	180	6,68	1,84	160	5,17	1,59	140	3,38	1,34	120	2,03	1,09	90	1,56
	15	1,65	90	1,68	1,38	80	1,42	1,11	60	1,14	0,81	50	0,84	0,38	20	0,41
35	5	1,88	320	18,37	1,63	280	14,52	1,39	240	11,07	1,15	200	8,03	0,91	160	4,97
	10	1,47	130	2,45	1,22	110	1,93	0,96	80	1,53	0,69	60	1,10	0,35	30	0,57
	15	0,96	60	1,11	0,63	40	0,74	-	-	-	-	-	-	-	-	-

EWT = Exchanger water inlet temperature (°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TH = Total heating capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

009.0																
EWT	ΔT	Ta (D.B.)														
		16			18			20			22			24		
		TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP
[°C]	[°C]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]
70	5	7,32	1280	176,62	7,02	1230	163,79	6,71	1170	151,46	6,41	1120	139,64	6,11	1070	128,30
	10	6,92	610	47,81	6,62	580	44,18	6,31	550	40,70	6,01	530	37,37	5,71	500	34,18
	15	6,51	380	21,43	6,21	360	19,72	5,90	340	18,08	5,60	330	16,52	5,30	310	15,02
65	5	6,61	1150	149,53	6,30	1100	137,62	6,00	1050	126,21	5,70	1000	115,31	5,40	940	104,90
	10	6,20	540	40,16	5,90	510	36,80	5,60	490	33,59	5,30	460	30,52	5,00	440	27,60
	15	5,79	340	17,82	5,48	320	16,24	5,18	300	14,73	4,88	280	13,29	4,58	270	11,93
60	5	5,89	1030	124,21	5,59	970	113,23	5,29	920	102,77	4,99	870	92,82	4,69	820	83,36
	10	5,48	480	33,03	5,18	450	29,94	4,88	430	27,00	4,58	400	24,21	4,29	370	21,57
	15	5,06	290	14,45	4,76	280	13,00	4,46	260	11,63	4,16	240	10,32	3,86	220	9,09
55	5	5,17	900	100,68	4,87	850	90,68	4,57	800	81,19	4,28	740	72,22	3,98	690	63,76
	10	4,76	410	26,41	4,46	390	23,60	4,16	360	20,95	3,87	340	18,45	3,57	310	16,10
	15	4,33	250	11,34	4,03	230	10,03	3,73	220	8,79	3,43	200	7,62	3,13	180	6,53
50	5	4,46	770	79,07	4,16	720	70,08	3,86	670	61,61	3,57	620	53,67	3,27	570	46,25
	10	4,04	350	20,34	3,74	320	17,83	3,44	300	15,48	3,15	270	13,28	2,85	250	11,23
	15	3,60	210	8,49	3,29	190	7,32	2,99	170	6,22	2,69	160	5,16	2,39	140	4,02
45	5	3,74	650	59,49	3,44	600	51,56	3,15	550	44,16	2,85	500	37,30	2,56	440	30,98
	10	3,31	290	14,87	3,02	260	12,67	2,72	240	10,63	2,42	210	8,75	2,13	180	7,02
	15	2,85	160	5,81	2,55	150	4,50	2,24	130	3,06	1,94	110	2,01	1,62	90	1,55
40	5	3,02	520	42,09	2,73	470	35,27	2,43	420	29,01	2,14	370	23,31	1,85	320	18,17
	10	2,58	220	10,03	2,29	200	8,15	1,99	170	6,37	1,69	150	4,32	1,39	120	2,27
	15	2,10	120	2,36	1,78	100	1,88	1,46	80	1,54	1,12	60	1,19	0,73	40	0,79
35	5	2,30	400	27,07	2,01	350	21,45	1,71	300	16,41	1,42	250	11,98	1,13	200	8,13
	10	1,85	160	5,07	1,54	130	2,83	1,24	110	2,03	0,92	80	1,51	0,56	50	0,93
	15	1,30	70	1,53	0,94	50	1,12	0,43	20	0,53	-	-	-	-	-	-

EWT = Exchanger water inlet temperature (°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TH = Total heating capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Heating performance

011.0																
EWT	ΔT	Ta (D.B.)														
		16			18			20			22			24		
		TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP
[°C]	[°C]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]
70	5	8,64	1510	230,34	8,28	1450	213,80	7,93	1390	197,88	7,57	1320	182,58	7,22	1260	167,89
	10	8,15	710	62,01	7,80	680	57,34	7,44	650	52,85	7,09	620	48,55	6,74	590	44,42
	15	7,65	440	27,63	7,30	420	25,44	6,94	400	23,33	6,59	380	21,31	6,23	360	19,38
65	5	7,79	1360	194,83	7,44	1300	179,46	7,08	1240	164,71	6,73	1180	150,59	6,38	1110	137,10
	10	7,30	640	52,01	6,95	610	47,68	6,59	580	43,54	6,24	540	39,58	5,89	510	35,80
	15	6,79	390	22,92	6,44	370	20,89	6,09	350	18,95	5,73	330	17,10	5,38	310	15,34
60	5	6,95	1210	161,65	6,59	1150	147,48	6,24	1090	133,95	5,89	1030	121,05	5,54	970	108,79
	10	6,45	560	42,68	6,10	530	38,70	5,75	500	34,91	5,40	470	31,31	5,05	440	27,89
	15	5,94	340	18,53	5,58	320	16,67	5,23	300	14,91	4,88	280	13,23	4,52	260	11,64
55	5	6,10	1060	130,85	5,75	1000	117,93	5,40	940	105,65	5,05	880	94,03	4,70	820	83,05
	10	5,60	490	34,04	5,25	460	30,43	4,90	430	27,01	4,55	400	23,78	4,20	370	20,74
	15	5,07	290	14,48	4,72	270	12,80	4,36	250	11,21	4,01	230	9,71	3,66	210	8,31
50	5	5,25	910	102,59	4,90	850	90,96	4,55	790	80,00	4,21	730	69,71	3,86	670	60,08
	10	4,74	410	26,14	4,39	380	22,91	4,04	350	19,87	3,70	320	17,03	3,35	290	14,39
	15	4,20	240	10,78	3,85	220	9,29	3,49	200	7,89	3,14	180	6,58	2,78	160	5,34
45	5	4,40	760	77,01	4,05	700	66,75	3,71	640	57,18	3,36	580	48,29	3,02	520	40,09
	10	3,89	340	19,02	3,54	310	16,19	3,19	280	13,56	2,84	250	11,14	2,49	220	8,92
	15	3,33	190	7,45	2,97	170	6,10	2,61	150	4,61	2,24	130	2,94	1,87	110	1,82
40	5	3,55	620	54,32	3,21	560	45,51	2,86	500	37,41	2,52	440	30,03	2,18	380	23,37
	10	3,02	260	12,75	3,21	560	45,51	2,32	200	8,15	1,97	170	6,08	1,61	140	3,58
	15	2,43	140	3,37	2,06	120	2,22	1,67	100	1,73	1,27	70	1,32	0,78	40	0,83
35	5	2,70	470	34,77	2,36	410	27,51	2,01	350	21,02	1,67	290	15,29	1,33	230	10,34
	10	2,15	190	7,24	1,79	150	4,45	1,43	120	2,35	1,05	90	1,69	0,61	50	1,00
	15	1,47	80	1,70	1,04	60	1,22	-	-	-	-	-	-	-	-	-

EWT = Exchanger water inlet temperature (°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TH = Total heating capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

017.0																
EWT	ΔT	Ta (D.B.)														
		16			18			20			22			24		
		TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP
[°C]	[°C]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]
70	5	11,24	1860	152,89	10,80	1860	152,39	10,34	1800	144,40	9,88	1720	133,22	9,42	1640	122,49
	10	10,66	930	45,43	10,19	890	41,99	9,73	850	38,69	9,27	810	35,52	8,81	770	32,49
	15	10,03	580	20,25	9,56	560	18,63	9,09	530	17,08	8,63	500	15,60	8,17	480	14,18
65	5	10,17	1770	142,24	9,71	1690	131,00	9,24	1610	120,22	8,78	1530	109,90	8,33	1450	100,04
	10	9,55	830	38,09	9,09	790	34,90	8,63	750	31,86	8,17	710	28,95	7,71	670	26,17
	15	8,91	520	16,79	8,45	490	15,30	7,98	460	13,87	7,52	440	12,51	7,06	410	11,22
60	5	9,07	1580	118,05	8,61	1500	107,68	8,15	1420	97,79	7,69	1340	88,35	7,24	1260	79,39
	10	8,45	740	31,25	7,98	700	28,32	7,52	660	25,54	7,07	620	22,89	6,61	580	20,39
	15	7,79	450	13,58	7,33	420	12,21	6,87	400	10,91	6,41	370	9,68	5,95	340	8,52
55	5	7,97	1380	95,57	7,51	1300	86,11	7,05	1220	77,13	6,60	1150	68,63	6,14	1070	60,60
	10	7,34	640	24,91	6,88	600	22,26	6,42	560	19,75	5,96	520	17,38	5,51	480	15,16
	15	6,67	390	10,61	6,21	360	9,38	5,75	330	8,21	5,29	310	7,12	4,82	280	6,09
50	5	6,86	1190	74,93	6,41	1110	66,43	5,95	1030	58,41	5,50	950	50,88	5,05	880	43,84
	10	6,22	540	19,13	5,77	500	16,76	5,31	460	14,54	4,85	420	12,46	4,40	380	10,52
	15	5,54	320	7,91	5,08	290	6,81	4,61	270	5,79	4,15	240	4,83	3,68	210	3,95
45	5	5,76	1000	56,25	5,30	920	48,75	4,85	840	41,74	4,40	760	35,24	3,95	690	29,25
	10	5,11	440	13,92	4,65	400	11,85	4,19	360	9,93	3,74	320	8,16	3,28	280	6,54
	15	4,40	250	5,48	3,93	230	4,54	3,46	200	3,66	2,98	170	2,82	2,50	140	1,88
40	5	4,65	800	39,68	4,20	730	33,23	3,75	650	27,31	3,30	570	21,92	2,86	490	17,07
	10	3,98	340	9,34	3,53	310	7,59	3,07	270	5,99	2,61	230	4,54	2,14	180	3,25
	15	3,23	190	3,31	2,75	160	2,26	2,25	130	1,23	1,72	100	0,82	1,09	60	0,53
35	5	3,55	610	25,40	3,10	540	20,10	2,65	460	15,36	2,20	380	11,18	-	-	-
	10	2,85	250	5,44	2,38	210	4,01	1,91	160	2,47	1,41	120	1,06	0,84	70	0,63
	15	1,99	110	1,05	1,43	80	0,76	0,54	30	0,30	-	-	-	-	-	-

EWT = Exchanger water inlet temperature (°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TH = Total heating capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Heating performance

021.0																
EWT	ΔT	Ta (D.B.)														
		16			18			20			22			24		
		TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP	TH	WF	WDP
[°C]	[°C]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]	[kW]	[l/h]	[kPa]
70	5	12,40	1860	144,28	11,92	1910	145,12	11,44	1860	144,26	10,96	1860	144,44	10,47	1820	139,56
	10	11,83	1030	51,56	11,31	990	47,68	10,80	940	43,95	10,29	900	40,37	9,78	850	36,94
	15	11,11	650	22,91	10,60	620	21,09	10,08	590	19,34	9,57	560	17,67	9,06	530	16,06
65	5	11,27	2010	150,38	10,77	1920	145,81	10,27	1780	136,77	9,76	1700	125,10	9,26	1610	113,94
	10	10,60	920	43,20	10,08	880	39,60	9,57	830	36,16	9,07	790	32,86	8,56	750	29,72
	15	9,87	570	18,98	9,36	540	17,30	8,85	510	15,69	8,34	480	14,15	7,83	450	12,69
60	5	10,07	1750	134,07	9,56	1660	122,37	9,05	1570	111,19	8,54	1480	100,52	8,04	1400	90,36
	10	9,36	820	35,40	8,85	770	32,10	8,35	730	28,95	7,84	680	25,96	7,34	640	23,12
	15	8,63	500	15,32	8,12	470	13,78	7,61	440	12,32	7,10	410	10,93	6,59	380	9,62
55	5	8,84	1530	108,48	8,33	1450	97,81	7,83	1360	87,65	7,33	1270	78,03	6,83	1190	68,93
	10	8,13	710	28,19	7,62	660	25,19	7,12	620	22,36	6,61	570	19,68	6,11	530	17,16
	15	7,38	430	11,95	6,87	400	10,56	6,36	370	9,25	5,85	340	8,01	5,34	310	6,85
50	5	7,61	1320	85,00	7,11	1230	75,39	6,61	1150	66,31	6,11	1060	57,79	5,61	970	49,80
	10	6,90	600	21,61	6,39	550	18,93	5,88	510	16,42	5,38	470	14,07	4,88	420	11,88
	15	6,13	350	8,88	5,61	320	7,65	5,10	290	6,49	4,59	260	5,42	4,07	230	4,42
45	5	6,39	1110	63,75	5,89	1020	55,26	5,39	930	47,33	4,89	850	39,97	4,39	760	33,18
	10	5,66	490	15,69	5,15	450	13,35	4,64	400	11,18	4,14	360	9,18	3,63	310	7,35
	15	4,86	280	6,14	4,34	250	5,07	3,82	220	4,08	3,29	190	3,17	2,74	160	2,25
40	5	5,16	890	44,90	4,66	810	37,61	4,16	720	30,91	3,66	630	24,80	3,17	550	19,30
	10	4,41	380	10,49	3,90	340	8,51	3,39	290	6,71	2,88	250	5,08	2,36	200	3,63
	15	3,56	200	3,73	3,02	170	2,72	2,47	140	1,51	1,87	110	0,85	1,16	70	0,54
35	5	3,93	680	28,68	3,43	590	22,69	2,93	510	17,32	2,43	420	12,59	-	-	-
	10	3,14	270	6,08	2,62	230	4,49	2,10	180	2,97	1,54	130	1,19	0,91	80	0,64
	15	2,18	130	1,11	1,54	90	0,78	-	-	-	-	-	-	-	-	-

EWT = Exchanger water inlet temperature (°C)
ΔT = Temperature differential (°C)
Ta = Ambient temperature (°C)

TH = Total heating capacity (kW)
WF = Water flow-rate (l/h)
WDP = Exchanger pressure drops (kPa)

Correction coefficients as a function of air flow

Fan Speed	007.0			011.0			015.0			021.0			031.0		
	TC	SC	TH	TC	SC	TH	TC	SC	TH	TC	SC	TH	TC	SC	TH
High	2,20	1,63	2,57	2,64	1,97	3,15	3,08	2,33	3,71	4,07	3,05	4,85	4,45	3,36	5,38
Medium	2,14	1,59	2,51	2,34	1,74	2,78	2,71	2,03	3,24	3,57	2,65	4,23	3,91	2,93	4,69
Low	1,78	1,31	2,08	2,02	1,49	2,40	2,56	1,91	3,05	3,18	2,35	3,76	3,43	2,55	4,10

- Cooling: Exchanger inlet water 7°C (temperature differential 5°C)
Ambient air 27°C D.B. / 19°C W.B.
- Heating: Exchanger inlet water 45°C (temperature differential 5°C)
Ambient air 20°C D.B.

TC = Total cooling capacity
SC = Sensible cooling capacity
TH = Total heating capacity

Accessories separately supplied

KJR90X - KJR90 electronic room control for wall installation

KJR90 LCD "touch-key" wall-mounted control.

Functions:

- On/Off
- Operation selection: Auto, Heating, Cooling, Dehumidification, Ventilation
- Temperature setting (temperature range selectable: 17~30°C)
- Set the fan speed (MIN - MED - MAX or AUTO)
- Timer setting
- Setting of deflectors position (swing)

Many additional functions such as:

- ECO mode
- Controller keypad lock
- Timed remainder air filter cleaning

The controller can be easily connected to the internal unit display by means of a connecting cable.

The control can be installed up to a max. distance of 15mt.

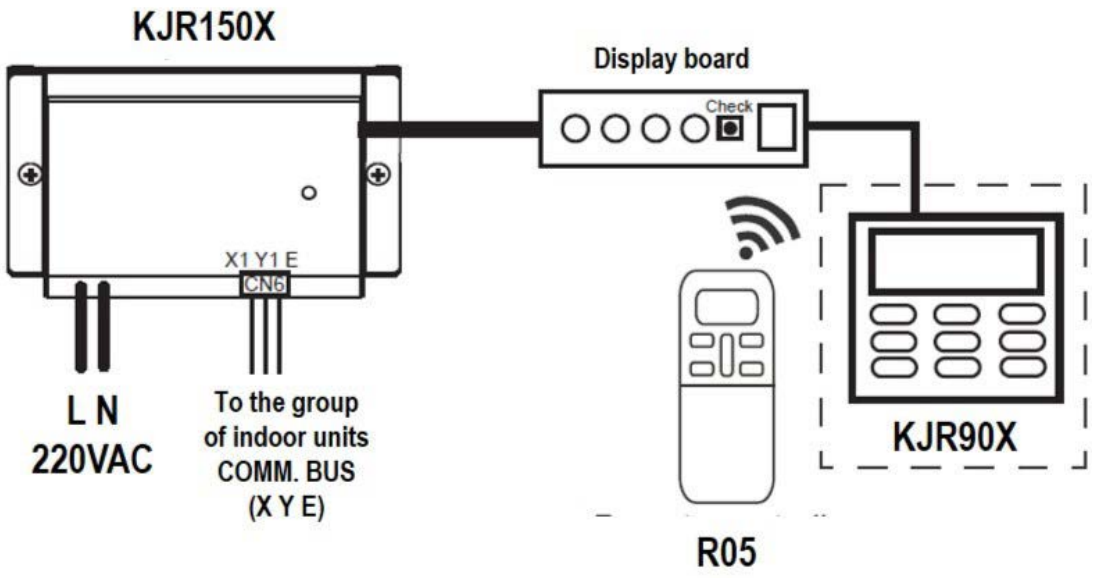
KJR150X - Indoor units' group controller

Allows the group control of up to 16 fancoil units from a single wall control KJR90X.

Each unit's operating parameters can also be individually controlled using its own remote controller R05.

Model	KJR150X
Dimensions (L×A×P) [mm]	85x150x70
Power supply	198-242V (50/60Hz)

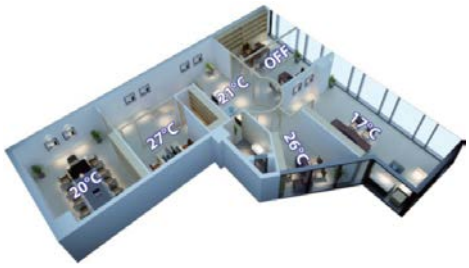
Installation schematic



CCM30BX - Touch-key indoor units' centralized controller (with cover plate)

CCM30BX

The centralized controllers are multifunctional devices that can control up to 64 indoor units within a maximum connection length of 1.200m. These controls give the user the opportunity to control multiple units as a single group, or alternatively to assign an individual temperature for each one



Single/unified control mode

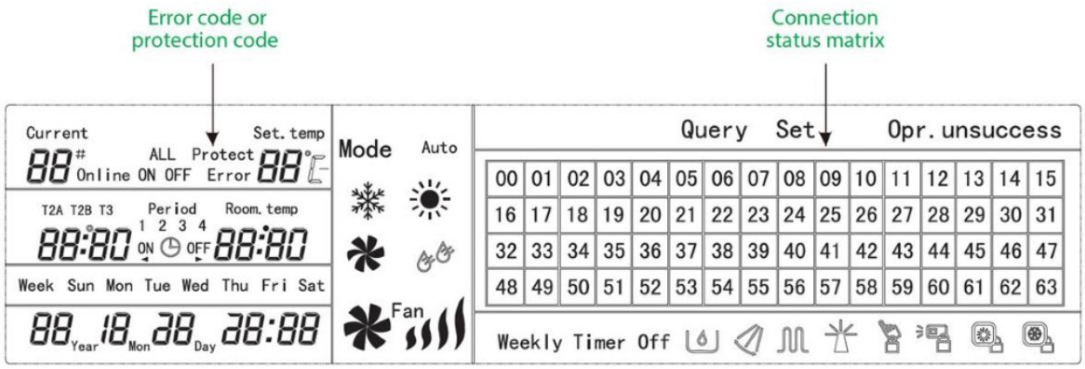
Controllers can be toggled between unified and single control modes, to enable either unified control of all units or control of a specific unit. Operating mode feedback is used to ensure that all units are operating in the mode specified by the user.

Multi-system control

Controlled units can be from different VRF/Mini VRF systems, totally up to 64 indoor units: this allows a centralized control that facilitates the building management. Ensure that the address is not repeated for more units.

Fancoil units operating status display

Error and protection codes are shown directly on centralized controllers' displays, avoiding the need to access outdoor units' PCBs to obtain codes during a system event. A wide range of error and protection codes provide system status information to building management professionals before contacting a service engineer.

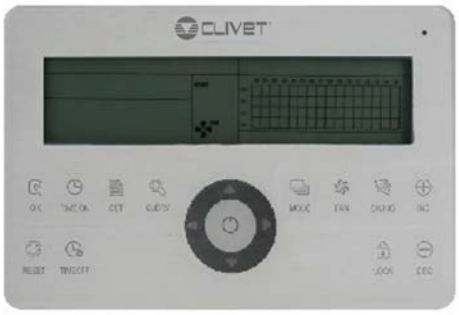


Multiple lock modes

In addition to locking the centralized controller's own keyboard, the centralized controller may also be used to lock each unit's operating mode or remote controller.

Clean filter reminder

The CCM30BX record the total running time of each indoor unit. When the accumulated running time reaches the value pre-set by the user, the system reminds the user to clean the indoor unit's filter, ensuring that the airflow does not become obstructed.



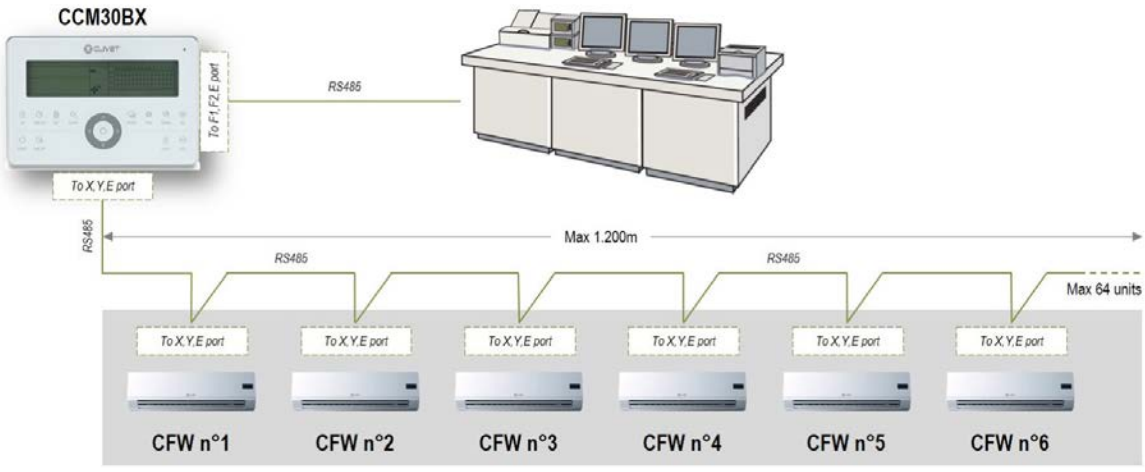
Model	CCM30BX
Dimensions LxAxP (mm)	180x122x78
Power supply	198-242V (50/60Hz)

Main features:

- Setting On/Off
- Setting mode Cool/Heat/Auto/Dry/Fan
- Setting temperature
- Fan speed selection High/Medium/Low/Auto
- Air swing function
- 24h On/Off timer
- Locking the controller buttons
- Air filter cleaning reminder
- Turn On/Off the LCD backlight

Installation schematic

The centralized controller can connect up to 64 indoor units on the network monitoring and building management systems.



Connection to BMS systems

Monitoring and control can be integrated into Building Management Systems (BMS), enabling air conditioning to be monitored alongside lightning, power, fire detection, access and security systems. Full compatibility with the four main BMS protocols via gateway devices: BACnet, Modbus and LonWorks.

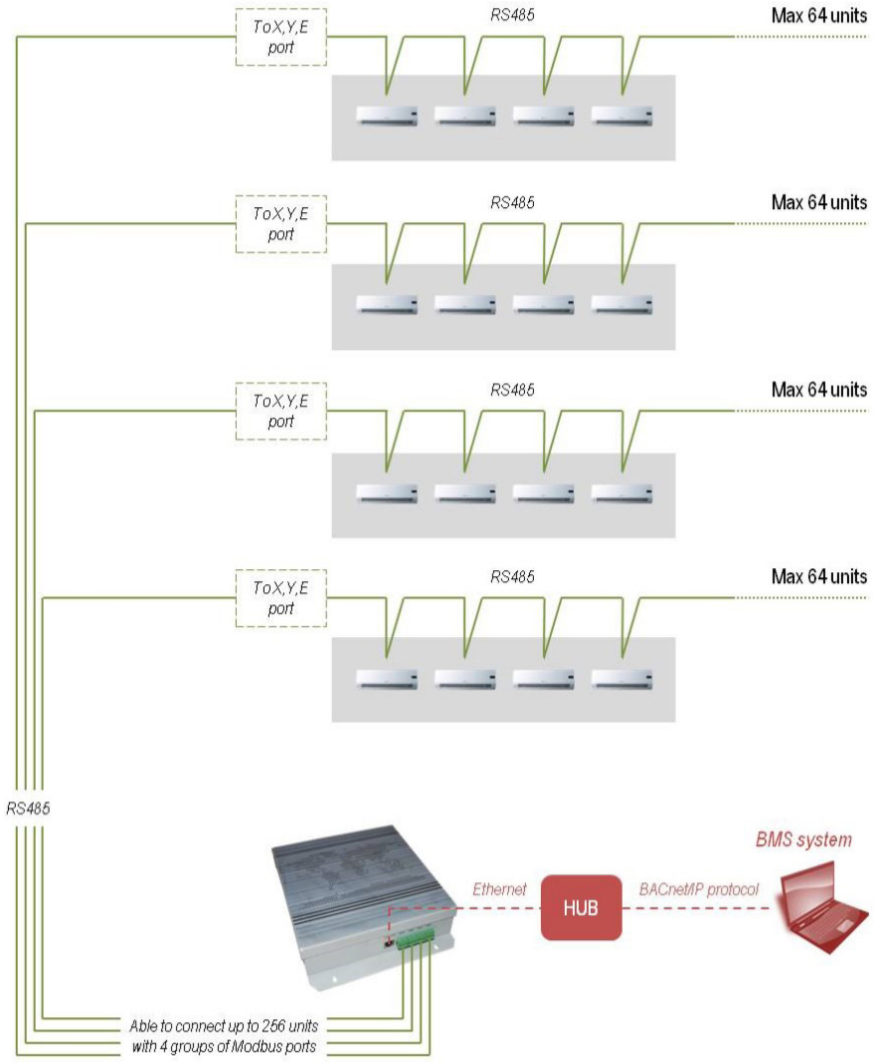
CCM08X - BACnet protocol

Each gateway can be connected to an fancoil unit's X,Y,E ports (up to 256 units), with built-in IP access.

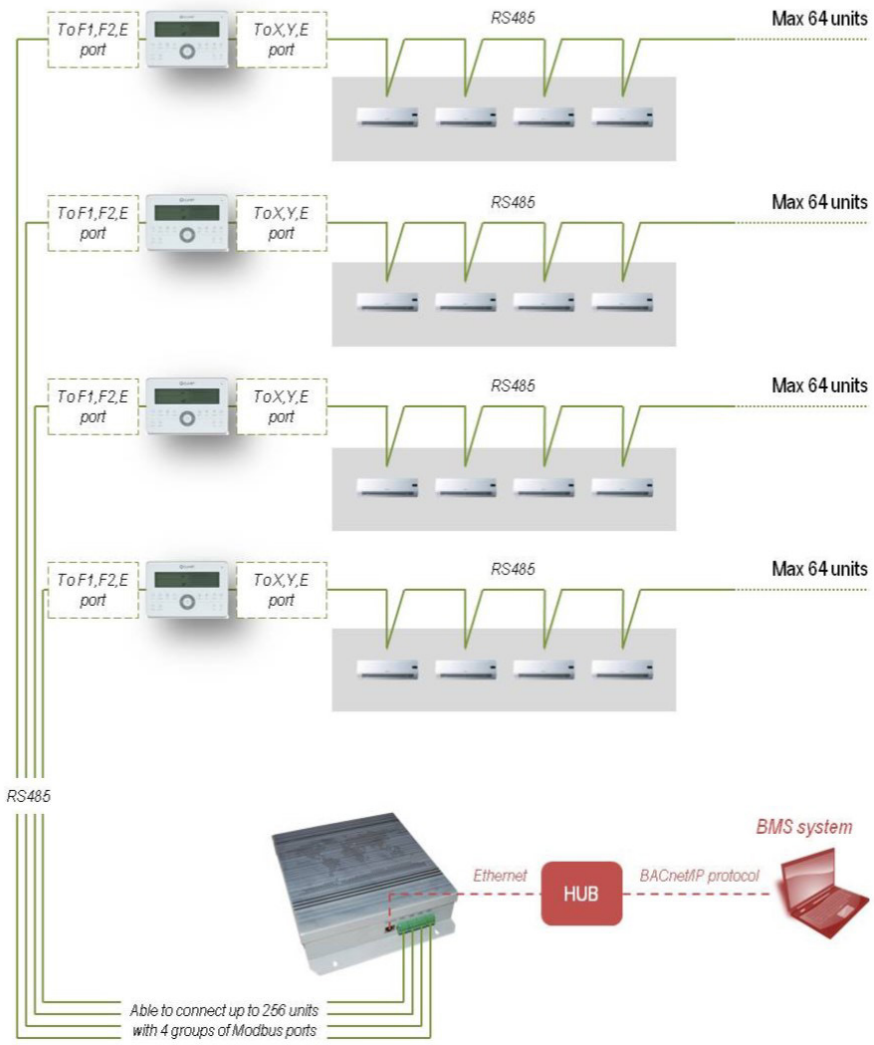
It is also compatible with connections of up to four CCM30BX centralized controller through F1, F2, E ports.

Model	CCM08X
Dimensions LxAxP (mm)	319x251x61
Power supply	AC 220V~50/60Hz

Installation schematic - Connecting to fancoil unit port X, Y, E



Installation schematic - Connection CCM30BX centralized control



Wide compatibility

The CCM08X is fully compatible with a wide range of leading Building Management Systems

	Company	Software BMS	Brand
1	Apogee Electronics	APOGEE	
2	Trane	Tracer Summit	
3	Honeywell	Alerton	
4	Schneider	Andover	
5	Johnson	METASYS	

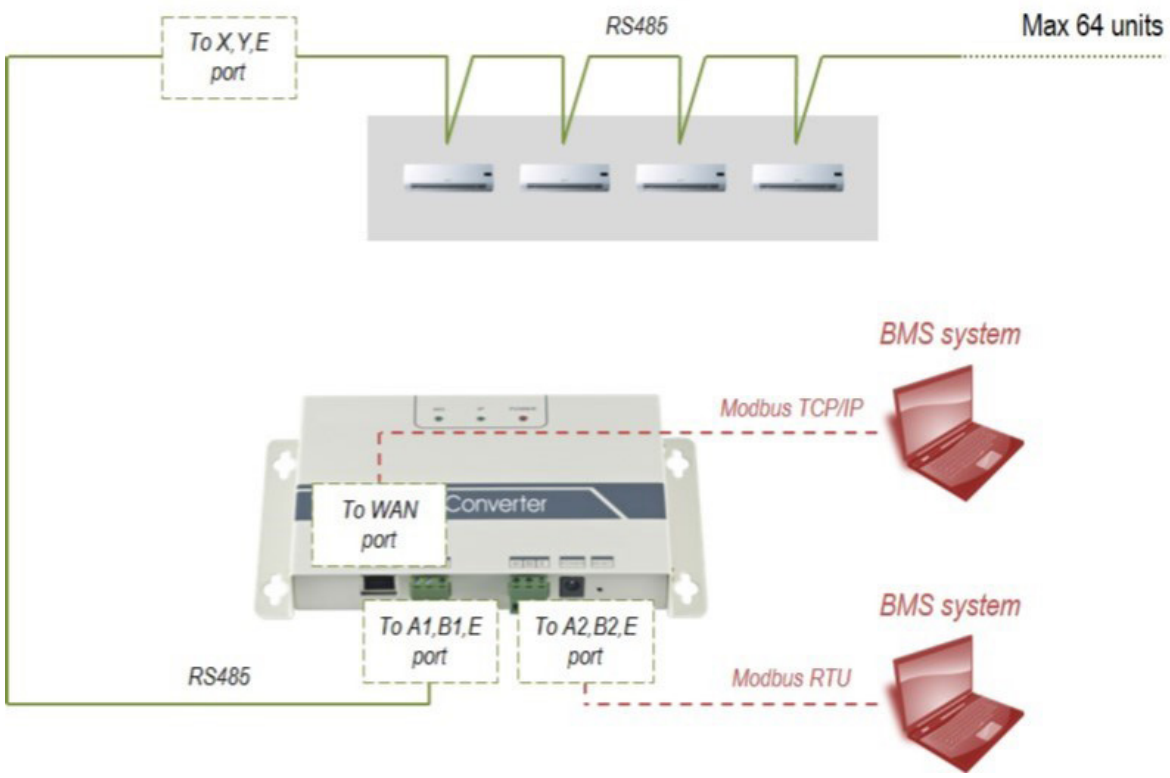
CCM18X - Modbus protocol for up to 64 fancoil units

CCM18UX - Modbus protocol for up to 16 fancoil units

Each gateway can connect up to 16 indoor units (CCM18UX) or up to 64 indoor units and up to 4 outdoor units of the same system (CCM18X) with BMS through either TCP/IP or RTU. Built-in IP access.

Model	CCM18X / CCM18UX
Dimensions LxAxP (mm)	319×251×61
Power supply	AC 220V~50/60Hz

Installation schematic - Connecting to fancoil unit port X, Y, E

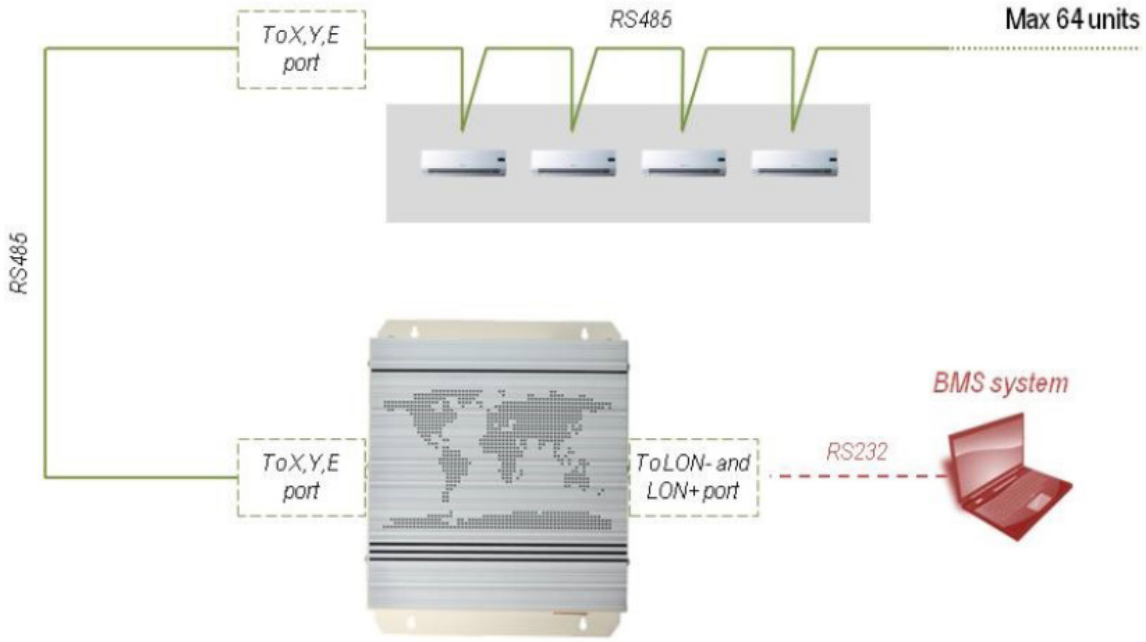


LONGWX - LowWorks protocol

Each gateway can connect up to 64 indoor units, directly to their XYE ports or through outdoor unit.

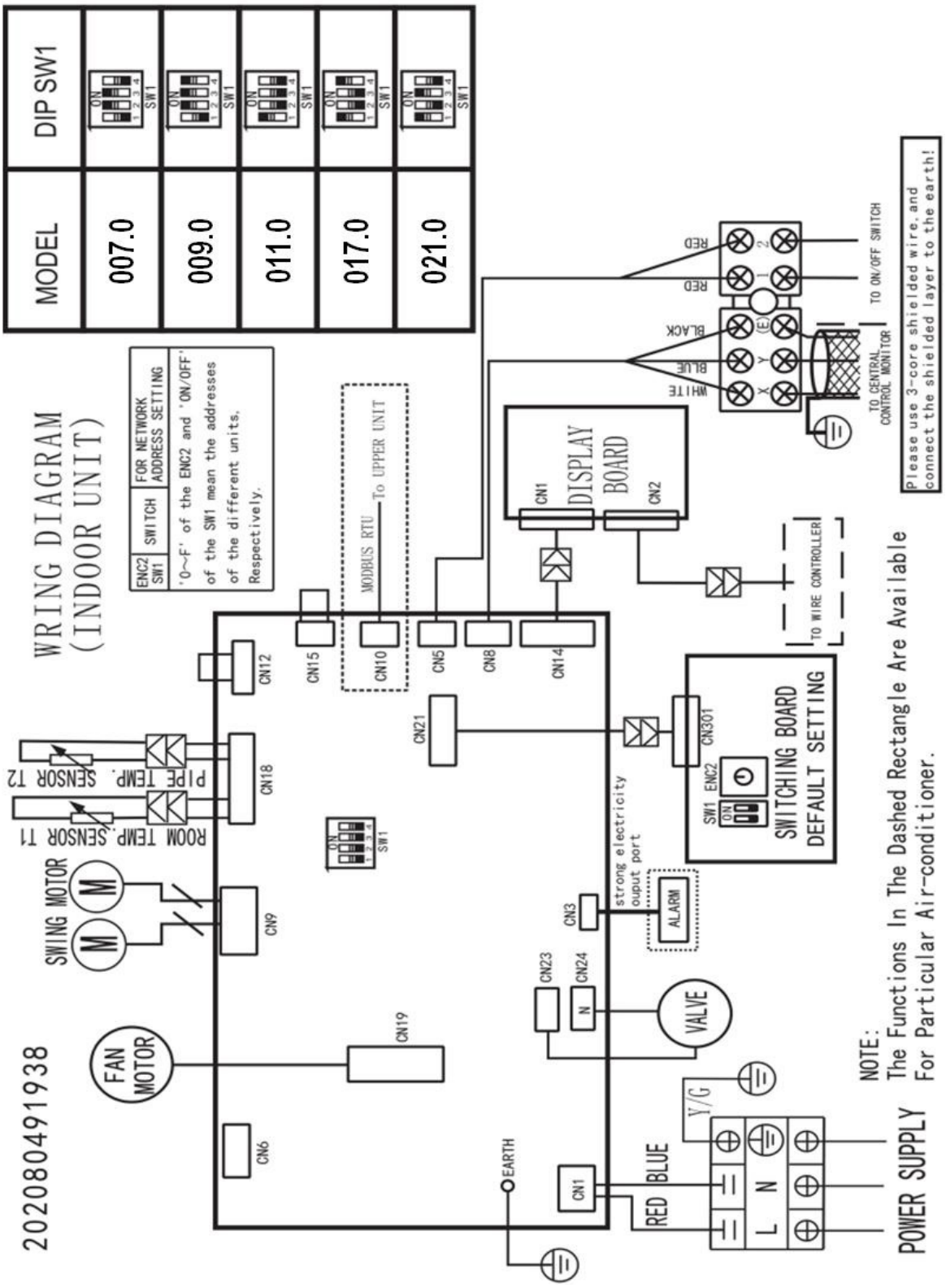
Model	LONGWX
Dimensions LxAxP (mm)	319x251x61
Power supply	AC 220V~50/60Hz

Installation schematic - Connecting to fancoil unit port X, Y, E



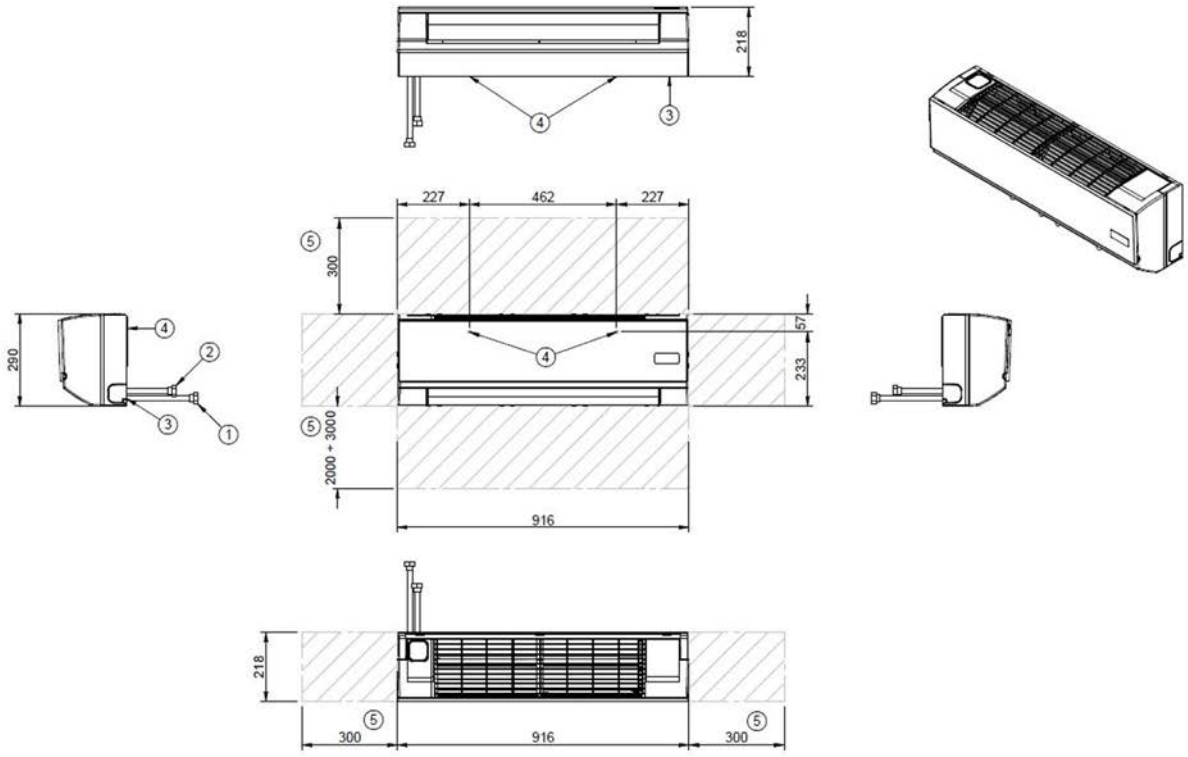
Wiring diagrams

Size 007.0, 009.0, 011.0, 017.0 e 021.0



Dimensional drawings

Size 007.0 ÷ 011.0



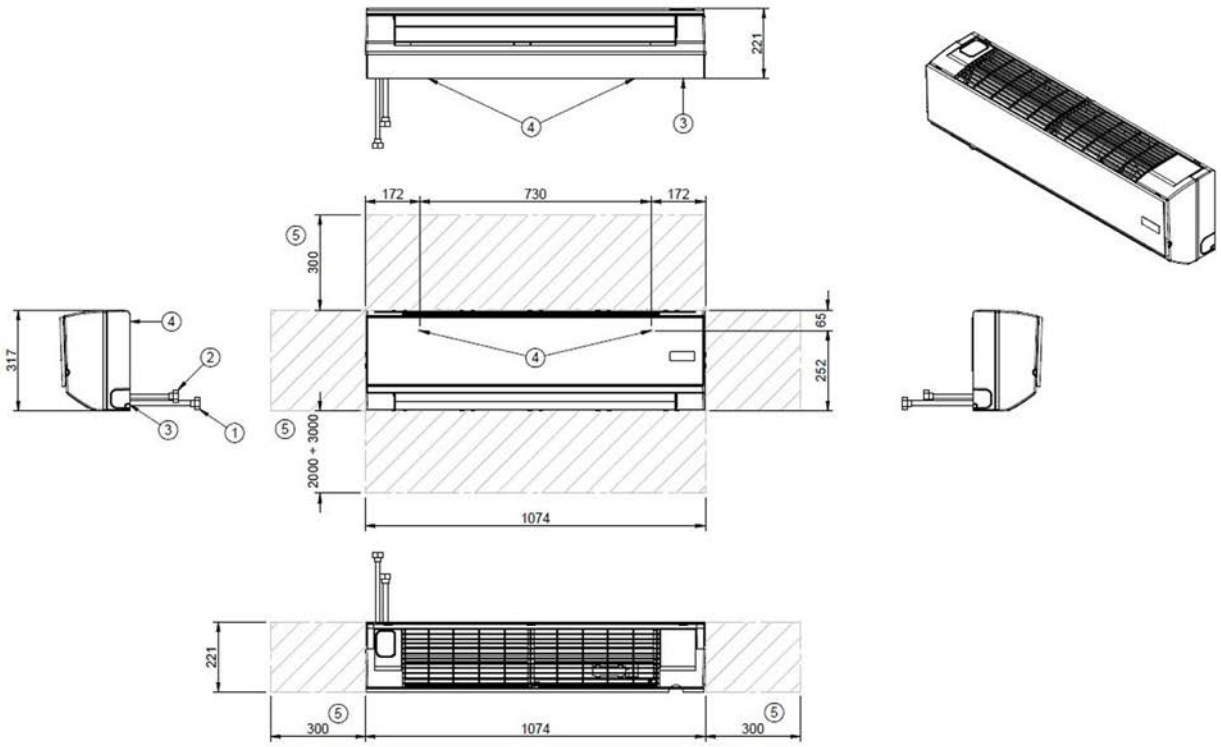
1. Water inlet (standard unit) Ø 3/4"
2. Water outlet (standard unit) Ø 3/4"
3. Condensated discharge Ø 20mm
4. Hole to hang unit
5. Clearance access recommended

Size			007.0	009.0	011.0
Unit					
Net dimensions	Width (W)	[mm]	916	916	916
	Height (H)	[mm]	290	290	290
	Depth (D)	[mm]	218	218	218
Packing	Width (W)	[mm]	1020	1020	1020
	Height (H)	[mm]	385	385	385
	Depth (D)	[mm]	300	300	300
Net weight		[kg]	12	12	12
Gross weight		[kg]	15,6	15,6	15,6

The presence of optional accessories may result in a substantial variation of the weights shown in the table.

Dimensional drawings

Size 017.0 ÷ 021.0



1. Water inlet (standard unit) Ø 3/4"
2. Water outlet (standard unit) Ø 3/4"
3. Condensated discharge Ø 20mm
4. Hole to hang unit
5. Clearance access recommended

Size			017.0	021.0
Unit				
Net dimensions	Width (W)	[mm]	1074	1074
	Height (H)	[mm]	317	317
	Depth (D)	[mm]	221	221
Packing	Width (W)	[mm]	1180	1180
	Height (H)	[mm]	410	410
	Depth (D)	[mm]	300	300
Net weight		[kg]	14,7	14,7
Gross weight		[kg]	18,6	18,6

The presence of optional accessories may result in a substantial variation of the weights shown in the table.

Specifications

Supply and installation of water terminal units for wall installation with self-contained control system built-in. It consists of a high efficiency copper/aluminium exchange coil with a finned heating element fitted with a spindle and equipped with an hydrofilic coating, unit housing realised in self-extinguishing ABS, standard on-off 3-way valve with electro-thermic servocontrol, washable renewable synthetic class G2 filter, easily accessible. Installation connection piping and condensate discharge have a multi-directional connection method allowing the connection to the left, right or rear for a maximum flexibility of the installation. Standard infrared remote control to manage the unit remotely through a receiver built-in installed. High efficiency tangential fan with standard DC Brushless motor with airflow control minute by minute according to the requested heating load.

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