

Technical manual





INDEX

INTRODUCTION		ACCESSORIES	
General description	4	Vent plate	47
DESIGN CHARACTERISTICS		Circular spigot Ø 150 mm for air supply to adjacent room (with flap lower)	48
Description of components	5	Pre-painted steel cover	49
GENERAL DIMENSIONS		Ø 80 mm circular spigot for fresh air intake (only spigot)	50
2 pipe system water cassette general dimensions	8	Fresh air baffle plate (with Ø 150 mm spigot)	51
2 pipe system water cassette dimensions detail	9	REGULATION	
4 pipe system water cassette general dimensions	10	Synoptic	52
4 pipe system water cassette dimensions detail	11	Controllers for water cassette model LIGHT NC	53
TECHNICAL DATA		Controllers for water cassette model LIGHT RC	59
2 pipe system general technical data	12	WIRING DIAGRAM FOR WATER CASSETTE MODEL LIGHT NC	
4 pipe system general technical data	13	Water cassette foreseen for wall mounted control	62
Working limits	14	WIRING DIAGRAM FOR WATER CASSETTE MODEL LIGHT RC	
Working conditions	14	Water cassette foreseen for infrared remote control	63
2 pipe system performance data	15		
4 pipe system performance data	24		
Coils water pressure drop	33		
Sound power spectrum (2 pipe system)	34		
Sound power spectrum (4 pipe system)	34		
VALVES			
2 way valve kit	35		
2 way valves installed (2 pipes system)	36		
2 way valves installed (4 pipes system)	37		
2 way valves installed not installed (2 pipe system)	38		
2 way valves installed not installed (4 pipe system)	39		
3 way valve kit	40		
3 way valves installed (2 pipes system)	41		
3 way valves installed (4 pipes system)	42		
3 way valves installed not installed (2 pipe system)	43		
3 way valves installed not installed (4 pipe system)	44		
Shut off/balancing valve	45		
Actuators	46		

INTRODUCTION**GENERAL DESCRIPTION**

LIGHT is the new cassette fan coil unit characterised by innovative design and a perfect blend of performance, low sound emission and extreme ease of installation and maintenance. The unit is produced in modular dimensions of 600 x 600mm and is available in 5 different capacities for the 2 pipe versions (61-62-63-64-65), and in 6 capacities for the 4 pipe versions (81-82-83-83C-84-84C). The models 83 and 84 are designed mainly for heating, whereas the plus 83C and 84C versions are more for cooling. The unit is equipped with a wide range of controls, like the infrared remote control or the BMS connection, that offer multiple adjustment solutions. The front panel made from RAL9010 pure white ABS is available in manually or automated adjustable air distribution louvers version, equipped with 4 independent small step by step type motors. Multiple combinations of integrated valves and integrated sheathed electric heaters offer great flexibility of personalisation of the unit during the production phase.

PLUS**Low noise level**

For a 360° room comfort that ensures that particular condition of physical and psychological well-being of the individual.

Integrated valves

It helps to avoid unnecessary energy thermal dispersion where unnecessary reducing significantly time and cost of installation.

Integrated electric heater

It allows an efficient decrease in installation delay and guarantees functional reliability.

Automatic louvers

For a in perfect control of the climatic comfort in cooling and heating modalities.

Easy installation and maintenance

EasyWaySystem allows an easy access to all the main components in need of ordinary or extraordinary maintenance.



DESIGN CHARACTERISTICS

DESCRIPTION OF COMPONENTS

FRONT PANEL

LIGHT is an innovative cassette fan coil unit, the result of accurate planning and design research to optimise the functional performance of the unit and guarantee optimal comfort and an aesthetically pleasing product.

The extremely thin front panel made of glaze pure white RAL9010 ABS, with its modern and minimalist design, can integrate perfectly with any kind of installation, residential or commercial, such as offices, stores and public places in general.

The LIGHT cassette panel follows the 600x600mm modular design for perfect integration with the standard dimensions that are common in false ceilings.

Coanda effect

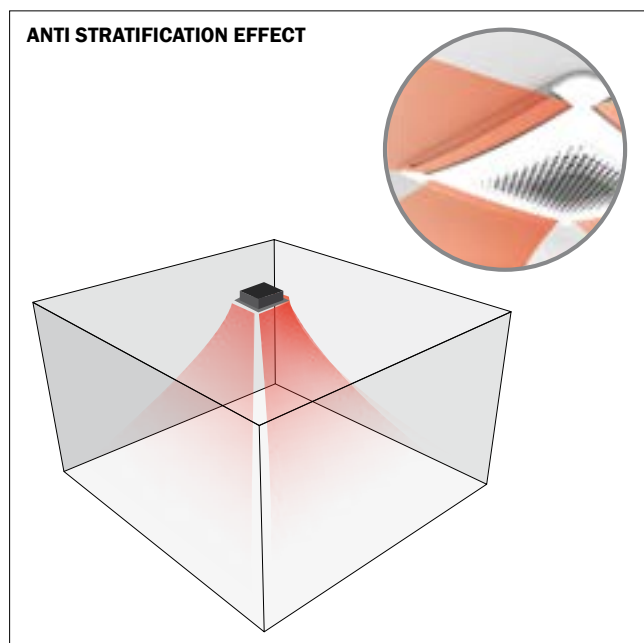
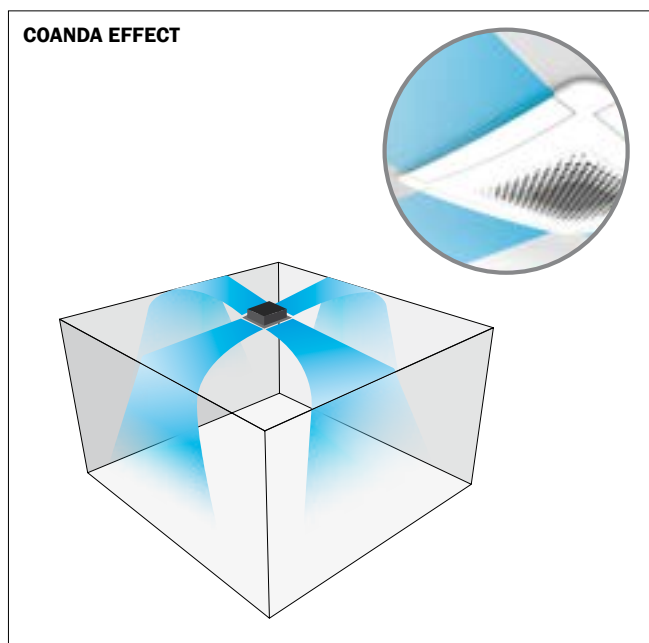
The position of the lateral air distribution louvers allows maximum exploitation of the Coanda effect in summer modality, offering ideal comfort without any annoying typical cold air flow. Thanks to this detail the cold air tends to flow towards the ceiling distributing itself in a regular, gradual way inside the room, guaranteeing ideal climatic comfort without the unpleasant thermal phenomena caused by direct cold air.

Anti stratification effect

In heating modality, the air distribution louvers are positioned automatically (optional) with an opening of 35°, allowing the warm air to create a downward airflow, ensuring the homogenous distribution of the room temperature and avoiding the problems linked to air stratification.

STRUCTURE

The structure of the unit is made of galvanized steel suitably shaped to increase the rigidity and provided with a protective anti-condensation coating. The internal thermal caulking is made of cross-linked polyolefin foam of 10 mm thickness.



CONDENSATE DRAIN PAN

The unit is provided with an auxiliary condensate drain pan. Positioned close to the zone of connection to the fittings, in the underlying part, it collects the dripping of any connections not well insulated even in the case of units with valves installed outside.

- INTERNAL CONDENSATE DRAIN PAN

Made of plastic material, thermoformed polystyrene, with the caulking suitably shaped in the part below, to properly convey the airflow in sintered polystyrene foam with a density of 50 kg/m³.

- EXTERNAL AUXILIARY CONDENSATE DRAIN PAN

Made of molded ABS, supplied as standard on all models, even if the valves are installed internally.

DESIGN CHARACTERISTICS

DESCRIPTION OF COMPONENTS

VALVES KIT

Sono disponibili diverse configurazioni di valvole, a due o tre vie, di tipo ON-OFF, modulanti o flottanti a 3 punti, complete a corredo di raccordi guarnizioni e valvole a sfera o detentore. Il kit valvole a due vie o tre vie può essere fornito anche già installato a bordo macchina con sensibile risparmio dei tempi e costi di installazione.

INTEGRATED VALVES

LIGHT was planned with the objective of being capable of integrating the valves module (optional), therefore guaranteeing functional reliability and cost reduction during the installation phase by the installing Company. The valves will be assembled and lodged inside the chassis directly during the production phase, therefore supplying the unit ready for installation.

The presence of the valves represents the guarantee of energy savings with the water by-pass that helps to avoid useless unnecessary thermal dispersion in case the unit is turned off, avoiding condensation on the frame.

It is necessary to install a 2 or 3-way valves for the correct operation of the unit.



HEAT EXCHANGER

Heat exchanger increasing in number of ranks as a function of the size of the unit. In case of plants with four pipes, the ranks are interleaved for improving the performance. Made of copper pipes and corrugated or turbulent aluminium fins; they are mechanically crimped to maximize the thermal contact and then shaped to allow its accommodation within the unit. The circuits have been made with a meticulous testing procedure, to optimize its performance. A careful evaluation on the path of the airflow, has allowed to obtain extremely low levels of noise. On all batteries there is the air vent valve whose discharge section is allowed to flow into the internal condensate drain pan.

The units are designed to be supplied with the valves assembled in the shape of the unit. This simplifies and reduces the time of installation.

It is always recommended to install the valve kit, 3-way in case of plants at fixed flow or 2-way for plants with variable flow.

AIR FILTER

The filter is positioned on suction inside the panel and is made of polypropylene honeycomb retina retained by a frame and its galvanized steel containment grid.

CONDENSATE DRAIN PUMP

The evacuation of the condensate created and accumulated in the condensate drain pan, is ensured with the aid of a centrifugal pump controlled by an electronic board, and activated by a floating of two levels. The first is the operation level, the second the level of alarm. In the state of alarm it is activated the locking of the ventilation and the closing of the valve if present (for this reason it is always recommended to install the valve kit). The pump is mounted on anti-vibration supports and it is provided with a non-return valve. The prevalence is 650mm.

ELECTRIC BOX

Consists of a steel box fixed on the outer side of the unit, inside are placed all the electrical components and the electronic control board (only for RC version). The terminals for connection to the electrical grid are easy to reach. The box has a hinged opening that allows to turn the flap into a comfortable work surface during the operation of installation/maintenance.

DESIGN CHARACTERISTICS

DESCRIPTION OF COMPONENTS

ELECTRIC HEATER

In the 2-pipe configuration, the unit is also available with electric resistance of plated type from 1500 to 2500 W, integrated in the coil pack. This type of resistance guarantees an optimal performance and are installed inside the machine directly in the factory to allow a significant reduction of the time of installation and ensure reliability of operation.

The particular optimization of the positioning of the resistances within the coil pack, offers the possibility to work also in "integration" mode in addition to the "substitution" to hot water mode for models LIGHT RC-E. For models LIGHT NC-E the only mode available is in "substitution" to hot water. The safety of operation is ensured by two thermostats installed in the unit, one with automatic reset and one with manual reset. The power supply is single-phase 230 Volt.

LIGHT NC-E/RC-E		61	62	63	64	65
Electric heater	W	1500	1500	2500	2500	2500
Power supply	V	230	230	230	230	230

LIGHT NC-E

Substitution mode



Only electric heater

LIGHT RC-E

Integration mode

AUTO In integration with water temperatures from 32 °C to 45 °C

Substitution mode



Only electric heater

MOUNTING SYSTEM

The unit has four open fixing brackets made of steel of 15/10 thickness, supplied and already fitted. Consist of a loop for mounting with threaded rods or with a through-hole for mounting with chains and carabiner.

ADJUSTMENT

A wide range of cutting-edge regulation products are available with the unit. For some models of control, the probes can also be supplied already mounted on the machine in the production phase.

PACKAGING

The unit is packaged on a cardboard box, with a protection in shaped polystyrene against impact. In the package they are the cardboard template to help the placing of the unit during the installation and the auxiliary drain pan that is always provided.

FAN UNIT

The fan unit is installed on elastic shock absorbers, consists of an asynchronous motor and a centrifugal fan with single intake with reverse blades in plastic material loaded with fibre glass. The single-speed motor has the shaft mounted on bearings with a condenser and a thermal protector integrated against overheating. With the aid of an autotransformer are realized the three speeds of use. The fan is balanced both statically and dynamically in order to reduce the vibrations and the noise.

ON REQUEST

Are available on specific request when placing the order:

- Special treatment on the heat exchanger for the installation in corrosive atmospheric areas
- Special filters
- Custom front panels or for special environments.
- Kit of floating or modulating valves (only for LIGHT-NC versions)

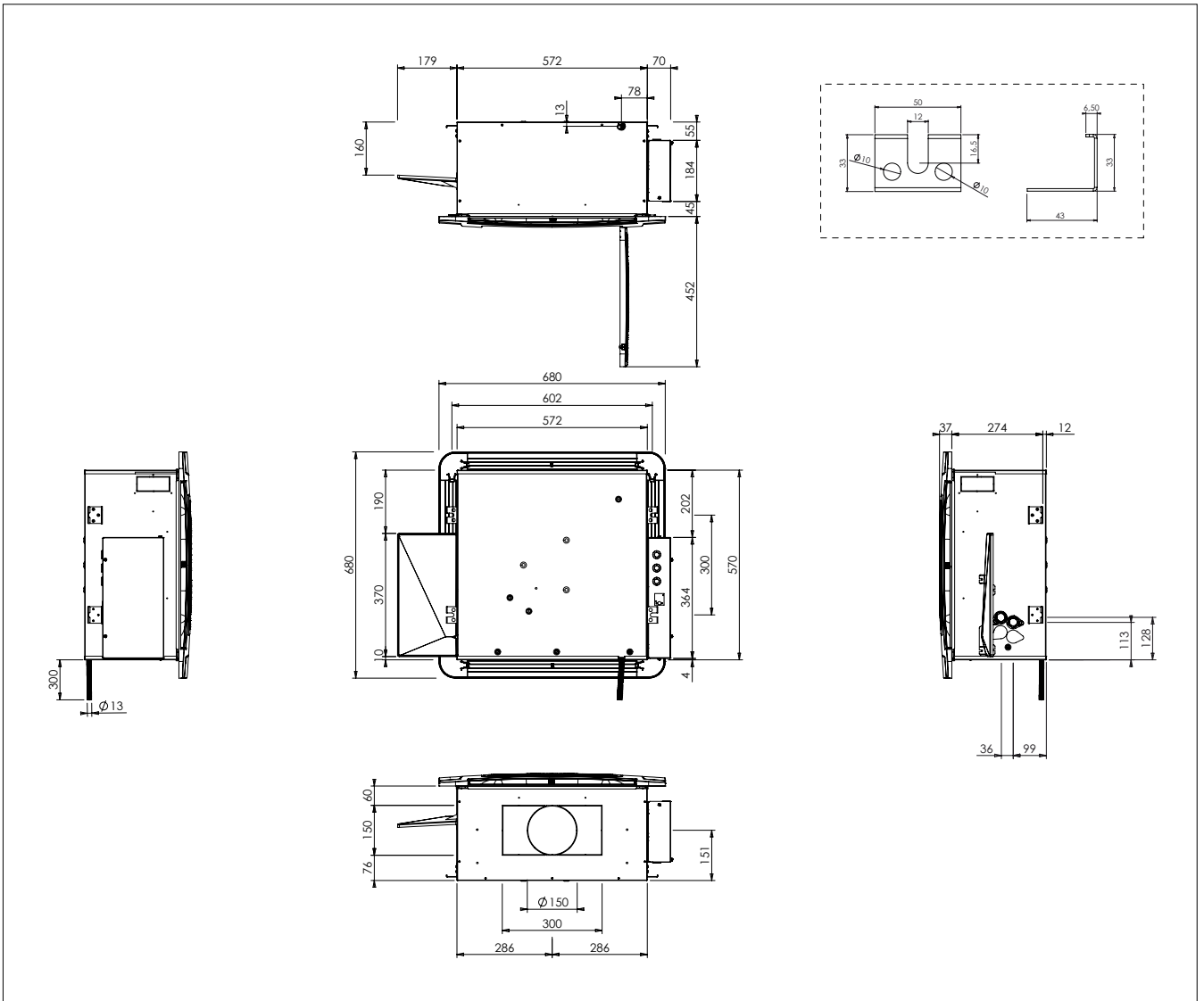
GENERAL DIMENSIONS

2 PIPE SYSTEM WATER CASSETTE GENERAL DIMENSIONS

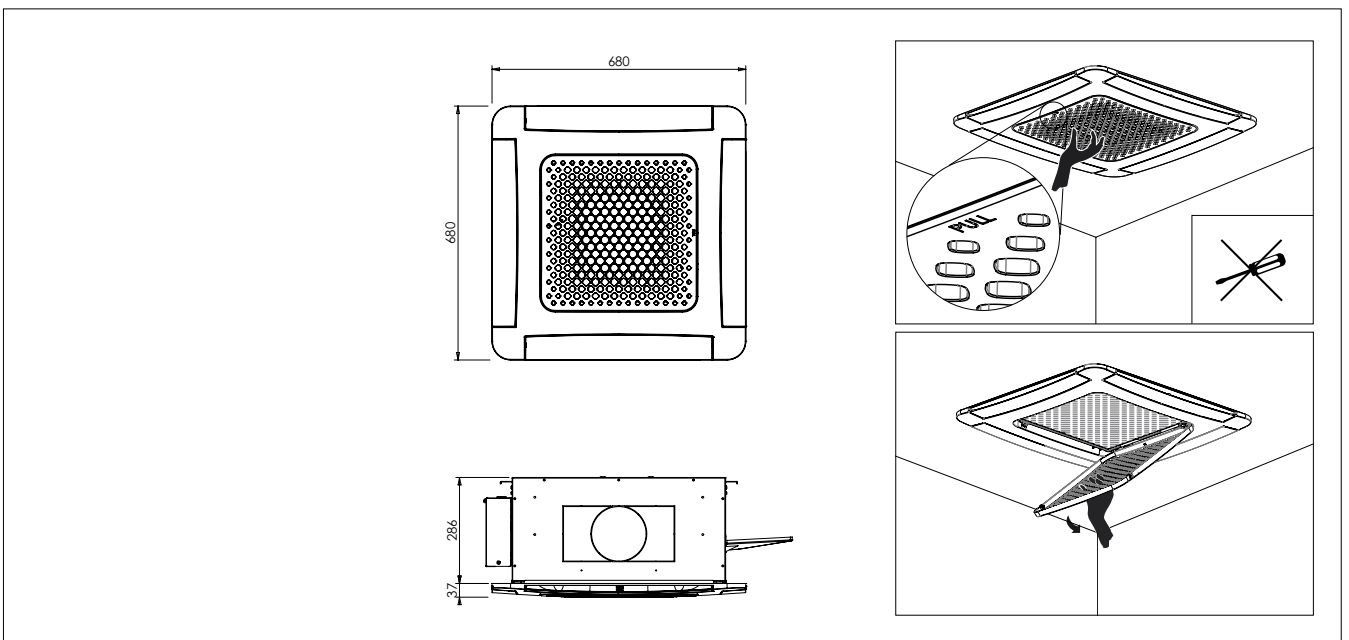
LIGHT		61	62	63	64	65
Fans number	mm	1	1	1	1	1
Coil number	mm	1	1	1	1	1
Coil fittings	∅	1/2"	1/2"	3/4"	3/4"	3/4"
Coil water content	l	1,0	1,6	2,2	2,2	2,2
Air supply in adjacent room (∅)	mm	150	150	150	150	150
Air supply in adjacent room (BxH)	mm	300x150	300x150	300x150	300x150	300x150
Fresh air intake (∅)	mm	80	80	80	80	80
Fresh air intake (BxH)	mm	100x45	100x45	100x45	100x45	100x45
Condensate drain fitting (external)	∅ mm	13,5	13,5	13,5	13,5	13,5
Unit weight	kg	20	21	23	23	24
Panel weight	kg	3	3	3	3	3
Packed unit dimensions	mm	650 x 720 x H340				
Packed panel dimensions	mm	740 x 740 x H120				
Packed unit weights	kg	22	23	25	25	26
Packed panel weights	kg	4	4	4	4	4

GENERAL DIMENSIONS

2 PIPE SYSTEM WATER CASSETTE DIMENSIONS DETAIL



FRONT PANEL DIMENSIONS DETAIL



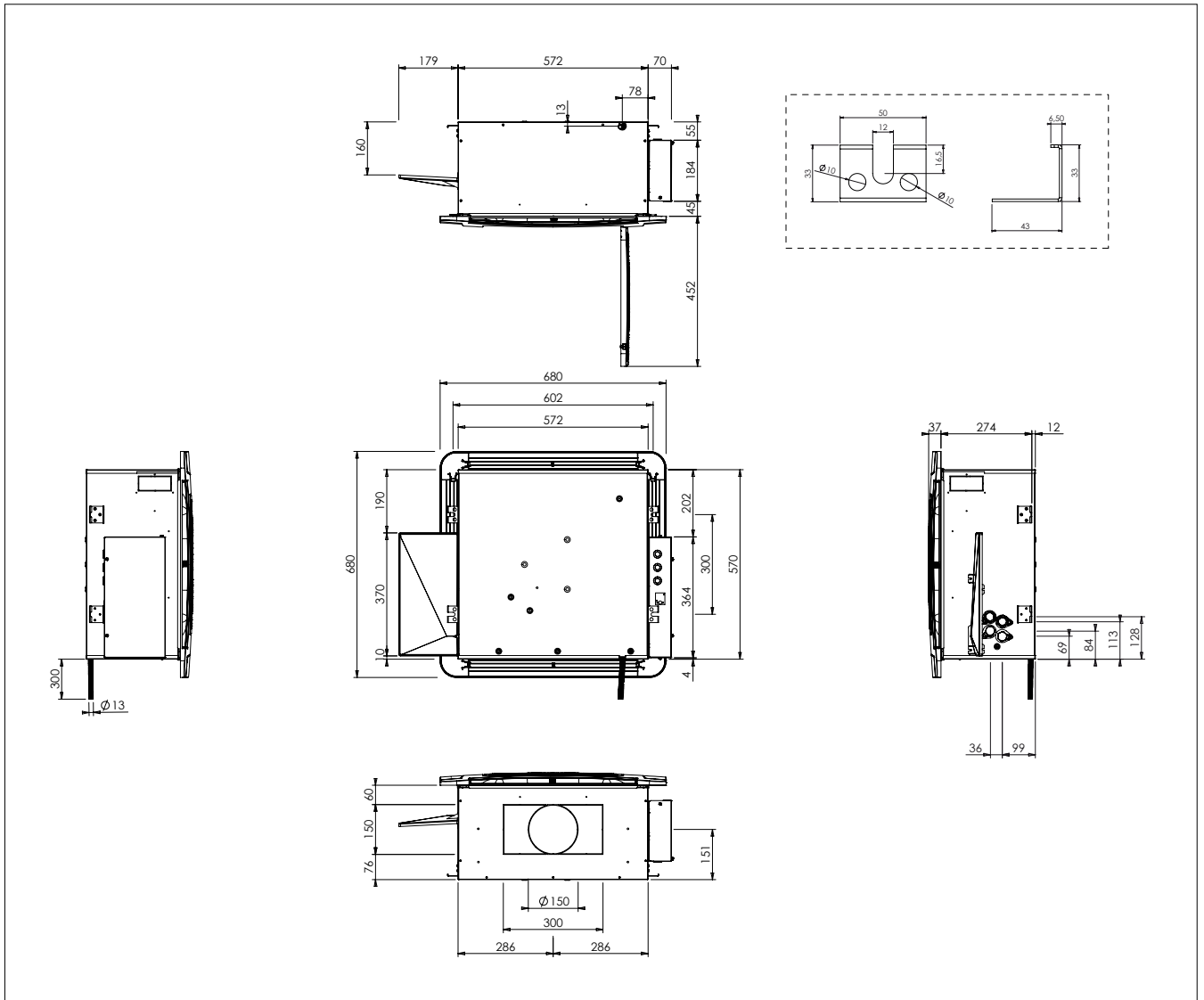
GENERAL DIMENSIONS

4 PIPE SYSTEM WATER CASSETTE GENERAL DIMENSIONS

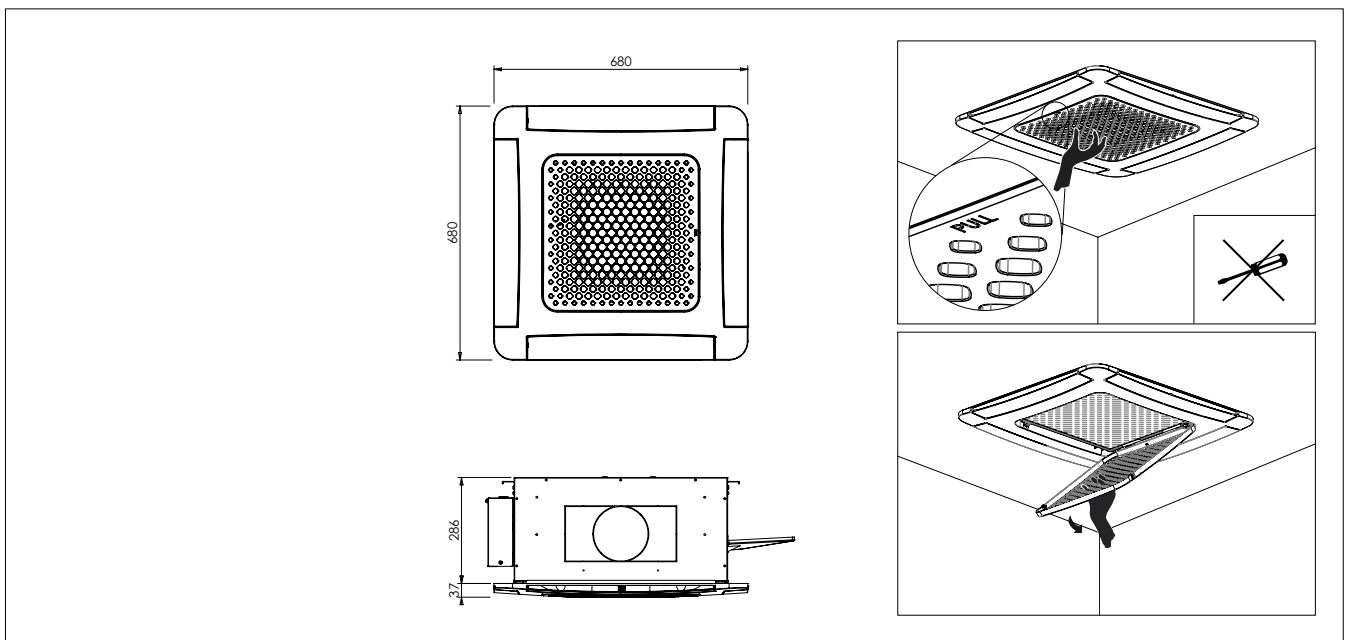
LIGHT		81	82	83	83C	84	84C
Fans number	mm	1	1	1	1	1	1
Coil number	mm	1	1	1	1	1	1
Coil fittings	main	∅	1/2"	1/2"	1/2"	1/2"	1/2"
	auxiliary	∅	1/2"	1/2"	1/2"	1/2"	1/2"
Coil water content (cooling)	l	1,1	1,7	1,7	2,0	1,7	2,0
Coil water content (heating)	l	0,4	0,7	0,7	0,4	0,7	0,4
Air supply in adjacent room (∅)	mm	150	150	150	150	150	150
Air supply in adjacent room (BxH)	mm	300x150	300x150	300x150	300x150	300x150	300x150
Fresh air intake (∅)	mm	80	80	80	80	80	80
Fresh air intake (BxH)	mm	100X45	100X45	100X45	100X45	100X45	100X45
Condensate drain fitting (external)	∅ mm	13,5	13,5	13,5	13,5	13,5	13,5
Unit weight	kg	23	24	24	24	24	24
Panel weight	kg	3	3	3	3	3	3
Packed unit dimensions	mm	650 x 720 x H340					
Packed panel dimensions	mm	740 x 740 x H120					
Packed unit weights	kg	25	26	26	26	26	26
Packed panel weights	kg	4	4	4	4	4	4

GENERAL DIMENSIONS

4 PIPE SYSTEM WATER CASSETTE DIMENSIONS DETAIL








FRONT PANEL DIMENSIONS DETAIL



TECHNICAL DATA

2 PIPE SYSTEM GENERAL TECHNICAL DATA

LIGHT				61	62	63	64	65	
	Total cooling capacity	(E)	W	max	2270	2710	4310	5050	5470
		(E)	W	med	1870	2470	3090	3700	4730
		(E)	W	min	1580	1970	2170	2730	4030
	Sensible cooling capacity	(E)	W	max	1890	2070	3170	3770	4080
		(E)	W	med	1520	1850	2220	2680	3430
		(E)	W	min	1260	1450	1520	1940	2860
	Water flow		l/h	max	391	467	742	869	941
			l/h	med	322	425	532	637	814
			l/h	min	272	339	374	470	694
Water pressure drop	(E)	kPa	max	20	16	24	24	30	
	(E)	kPa	med	14	14	18	18	24	
	(E)	kPa	min	11	10	11	16	18	
	Heating capacity	(E)	W	max	2800	3150	4910	5900	6500
		(E)	W	med	2300	2850	3522	4150	5900
		(E)	W	min	1900	2300	2510	3100	4900
Water pressure drop	(E)	kPa	max	19	16	19	21	29	
	(E)	kPa	med	13	13	17	18	23	
	(E)	kPa	min	10	9	10	15	18	
	Sound power level	(E)	dB(A)	max	46	44	52	58	62
		(E)	dB(A)	med	39	41	44	49	59
		(E)	dB(A)	min	33	34	34	39	53
Sound pressure level		dB(A)	max	37	35	43	49	53	
		dB(A)	med	30	32	35	40	50	
		dB(A)	min	24	25	25	30	44	
	Air flow		m ³ /h	max	367	398	550	660	760
			m ³ /h	med	295	355	398	468	660
			m ³ /h	min	224	269	269	328	550
ASYNCHRONOUS MOTOR (LIGHT NC/RC)									
Absorbed power	(E)	W	max	48	43	63	75	89	
Absorbed current		A	max	0,22	0,19	0,28	0,33	0,39	
ELECTRIC HEATER (LIGHT NC-E/RC-E)									
	Electric heater	W	-	1500	1500	2500	2500	2500	
	Power supply	V	-	230	230	230	230	230	

- **Standard unit with free outlet:** external static pressure = 0 Pa
- **Sound power level:** ISO 23741
- **Sound pressure level:** 8,6 dB(A) lower that the sound power level for a room of 90 m³ with a reverberation time of 0,5 sec.
- **Supported power supply:** ~230V±10% / 1ph / 50Hz



COOLING
Inlet water temp.: 7 °C
Outlet water temp.: 12 °C
Inlet air temp.: 27 °C d.b. - 19 °C w.b.



HEATING
Air temp.: 20 °C
Inlet water temp.: 50 °C

(E)



TECHNICAL DATA

4 PIPE SYSTEM GENERAL TECHNICAL DATA

LIGHT				81	82	83	83C	84	84C
Total cooling capacity	(E)	W	max	2350	2750	3400	3890	3900	4470
	(E)	W	med	1940	2410	2550	3000	3100	3460
	(E)	W	min	1630	1890	1910	2000	2400	2660
Sensible cooling capacity	(E)	W	max	1920	2020	2610	2920	3050	3420
	(E)	W	med	1540	1750	1910	2200	2360	2570
	(E)	W	min	1250	1370	1390	1430	1780	1930
Water flow		l/h	max	405	473	585	670	671	769
		l/h	med	334	415	439	516	534	596
		l/h	min	281	326	329	344	413	458
Water pressure drop	(E)	kPa	max	18	14	17	22	21	28
	(E)	kPa	med	15	12	14	19	17	22
	(E)	kPa	min	10	10	10	15	12	17
Heating capacity	(E)	W	max	3050	3500	4450	3300	5000	3710
	(E)	W	med	2600	3050	3500	2670	4000	2980
	(E)	W	min	2010	2450	2450	1910	3150	2390
Water pressure drop	(E)	kPa	max	15	15	18	23	22	27
	(E)	kPa	med	14	12	15	19	19	24
	(E)	kPa	min	11	9	9	14	12	17
Sound power level	(E)	dB(A)	max	46	44	52	52	58	58
	(E)	dB(A)	med	39	41	44	44	49	49
	(E)	dB(A)	min	33	34	34	34	39	39
Sound pressure level		dB(A)	max	37	35	43	43	49	49
		dB(A)	med	30	32	35	35	40	40
		dB(A)	min	24	25	25	25	30	30
Air flow		m ³ /h	max	367	398	550	550	660	660
		m ³ /h	med	295	355	398	398	468	468
		m ³ /h	min	224	269	269	269	328	328

ASYNCHRONOUS MOTOR (LIGHT NC/RC)

Absorbed power	(E)	W	max	48	43	63	63	75	75
Absorbed current		A	max	0,22	0,19	0,28	0,28	0,33	0,33

- **Standard unit with free outlet:** external static pressure = 0 Pa
- **Sound power level:** ISO 23741
- **Sound pressure level:** 8,6 dB(A) lower that the sound power level for a room of 90 m³ with a reverberation time of 0,5 sec.
- **Supported power supply:** ~230V±10% / 1ph / 50Hz



COOLING
Inlet water temp.: 7 °C
Outlet water temp.: 12 °C
Inlet air temp.: 27 °C d.b. - 19 °C w.b.



HEATING
Air temp.: 20 °C
Inlet water temp.: 70/60 °C

(E)



TECHNICAL DATA**WORKING LIMITS****SUMMER (COOLING)**

Minimum inlet water temperature	+5 °C
Maximum operating pressure	8 bar
Maximum room air temperature	+35 °C
Maximum room air humidity (non-condensing)	80%

WINTER (HEATING)

Maximum inlet water temperature	+70 °C
Maximum operating pressure	8 bar
Minimum room air temperature	+5 °C
Maximum room air humidity (non-condensing)	80%
Maximum room air temperature	+35 °C

WORKING CONDITIONS

Minimum water temperature (heating)	+32 °C
Maximum water temperature (cooling)	+15 °C
Maximum water temperature for operation with electric heater	+45 °C
Minimum system pressure for operation with electric heater	1,5 bar

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
COOLINGWATER TEMPERATURE:
5/10 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	1920	990	329	15,5	1910	1130	328	15,4	1910	1270	327	15,4
	2	295	2270	1140	388	19,7	2260	1320	387	19,6	2250	1500	386	19,5
	3	367	2730	1390	467	27,8	2720	1620	466	27,6	2710	1840	465	27,5
62	1	269	2360	1140	404	14	2350	1310	402	13,9	2340	1460	401	13,8
	2	355	3010	1440	517	20,3	3000	1660	515	20,2	2990	1880	513	20
	3	398	3310	1600	567	23,2	3300	1850	565	23	3290	2090	563	22,9
63	1	269	2540	1220	436	14,6	2530	1380	434	14,5	2520	1530	432	14,4
	2	398	3650	1760	626	24	3640	2000	623	23,9	3620	2230	621	23,7
	3	550	5120	2490	877	31,9	5100	2840	874	31,7	5080	3180	870	31,5
64	1	328	3210	1540	550	21,7	3190	1750	547	21,5	3180	1950	545	21,3
	2	468	4430	2120	759	24,9	4410	2420	756	24,8	4390	2710	753	24,6
	3	660	6120	2960	1048	33,7	6090	3400	1044	33,5	6070	3820	1040	33,3
65	1	550	4830	2270	827	24,9	4810	2600	824	24,8	4790	2910	820	24,6
	2	660	5730	2690	982	33,8	5710	3100	978	33,6	5680	3500	974	33,4
	3	760	6660	3180	1141	42,6	6630	3670	1137	42,4	6610	4150	1133	42,1

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	1900	1410	326	15,3	1890	1540	325	15,2
	2	295	2250	1680	385	19,4	2240	1860	384	19,4
	3	367	2700	2060	464	27,4	2700	2280	463	27,3
62	1	269	2330	1620	399	13,7	2320	1770	398	13,6
	2	355	2980	2090	511	19,9	2970	2300	509	19,8
	3	398	3270	2330	561	22,7	3260	2570	559	22,6
63	1	269	2510	1680	430	14,3	2500	1830	428	14,2
	2	398	3610	2460	618	23,5	3590	2690	615	23,4
	3	550	5060	3510	867	31,3	5040	3840	863	31,1
64	1	328	3170	2140	542	21,1	3150	2330	540	21
	2	468	4370	3000	749	24,4	4360	3280	746	24,2
	3	660	6050	4230	1036	33,1	6020	4640	1032	32,9
65	1	550	4770	3220	817	24,4	4750	3530	814	24,3
	2	660	5660	3890	970	33,1	5640	4270	967	32,9
	3	760	6580	4610	1129	41,8	6560	5070	1125	41,6

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
COOLINGWATER TEMPERATURE:
7/12 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	1600	860	274	11,2	1590	1000	273	11,1	1590	1130	272	11,1
	2	295	1890	1000	324	14,2	1880	1170	323	14,1	1880	1350	322	14,1
	3	367	2290	1230	393	20,3	2280	1450	392	20,2	2280	1670	391	20,1
62	1	269	2010	990	346	10,4	2000	1150	343	10,3	1990	1300	341	10,1
	2	355	2490	1220	428	14,3	2490	1430	427	14,2	2480	1640	425	14,1
	3	398	2740	1360	470	16,3	2730	1600	468	16,2	2720	1840	467	16,1
63	1	269	2200	1060	378	11,3	2190	1220	376	11,2	2180	1370	374	11,1
	2	398	3160	1530	542	18,6	3130	1770	538	18,4	3110	2000	534	18,2
	3	550	4360	2150	748	24,4	4340	2500	745	24,3	4330	2840	742	24,2
64	1	328	2760	1340	474	16,4	2750	1550	472	16,2	2740	1750	471	16,1
	2	468	3760	1810	645	18,5	3730	2100	640	18,2	3720	2390	638	18,1
	3	660	5090	2520	873	24,3	5070	2940	871	24,2	5060	3360	869	24,1
65	1	550	4100	1930	703	18,5	4050	2240	696	18,2	4040	2550	694	18,1
	2	660	4770	2250	818	24,3	4750	2650	816	24,2	4740	3040	814	24,1
	3	760	5530	2690	949	30,5	5510	3160	945	30,4	5490	3620	942	30,2

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	1580	1260	271	11	1580	1390	271	10,9
	2	295	1870	1520	321	14	1860	1690	320	13,9
	3	367	2270	1890	390	20	2260	2100	389	19,9
62	1	269	1970	1450	338	10	1950	1600	335	9,9
	2	355	2470	1850	424	14	2460	2050	422	13,9
	3	398	2710	2070	465	16	2700	2300	464	15,9
63	1	269	2170	1520	372	11	2160	1670	371	10,9
	2	398	3090	2220	530	17,9	3070	2440	526	17,7
	3	550	4310	3170	739	24	4290	3500	737	23,9
64	1	328	2730	1940	468	16	2710	2130	465	15,8
	2	468	3700	2680	635	18	3690	2960	632	17,8
	3	660	5050	3770	867	24	5030	4170	864	23,9
65	1	550	4030	2860	691	18	4020	3160	689	17,9
	2	660	4730	3430	812	24	4710	3810	809	23,8
	3	760	5470	4080	939	30	5450	4530	935	29,8

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
COOLINGWATER TEMPERATURE:
9/14 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	1260	740	216	7,3	1250	870	215	7,3	1250	1000	215	7,2
	2	295	1480	840	255	9,3	1480	1010	254	9,2	1470	1190	253	9,2
	3	367	1800	1040	309	13,2	1790	1260	308	13,2	1790	1480	307	13,1
62	1	269	1530	790	263	6,2	1520	940	262	6,2	1520	1090	261	6,2
	2	355	1960	1000	336	9,1	1950	1210	335	9	1940	1420	334	9
	3	398	2150	1130	369	10,4	2140	1360	367	10,3	2130	1590	366	10,3
63	1	269	1760	870	303	7,7	1760	1020	302	7,6	1750	1170	300	7,6
	2	398	2510	1260	431	12,5	2500	1490	429	12,5	2490	1720	427	12,4
	3	550	3480	1800	597	17	3460	2140	595	16,9	3450	2470	593	16,8
64	1	328	2160	1090	372	10,3	2150	1280	370	10,3	2140	1470	368	10,2
	2	468	2970	1490	510	12	2950	1780	508	11,9	2940	2060	506	11,9
	3	660	4050	2110	697	16,3	4040	2530	694	16,2	4030	2930	692	16,1
65	1	550	3220	1550	553	12,1	3210	1850	551	12	3190	2150	549	11,9
	2	660	3800	1860	652	16,2	3780	2240	650	16,1	3770	2630	648	16
	3	760	4390	2240	754	20,3	4380	2700	752	20,2	4360	3160	750	20

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	1240	1130	214	7,2	1240	1240	213	7,2
	2	295	1470	1350	252	9,2	1470	1470	252	9,1
	3	367	1780	1690	306	13,1	1780	1780	305	13
62	1	269	1510	1230	260	6,1	1500	1380	259	6,1
	2	355	1940	1620	333	8,9	1930	1820	332	8,9
	3	398	2120	1820	365	10,2	2120	2040	364	10,1
63	1	269	1740	1310	299	7,5	1730	1460	298	7,4
	2	398	2480	1950	425	12,3	2470	2170	424	12,2
	3	550	3440	2800	591	16,7	3430	3120	589	16,6
64	1	328	2130	1660	366	10,1	2120	1840	365	10
	2	468	2930	2340	504	11,8	2920	2620	502	11,7
	3	660	4010	3340	689	16	4000	3730	687	15,9
65	1	550	3180	2450	547	11,8	3170	2740	545	11,8
	2	660	3760	3000	646	15,9	3740	3380	643	15,8
	3	760	4350	3600	747	19,9	4330	4040	745	19,8

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
COOLINGWATER TEMPERATURE:
11/16 °C

Mod.	Speed	Qa [m ³ /h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	920	620	158	4,2	910	740	157	4,2	910	860	157	4,1
	2	295	1090	690	188	5,4	1090	860	187	5,4	1080	1020	187	5,4
	3	367	1330	870	228	7,8	1320	1080	227	7,7	1320	1280	227	7,7
62	1	269	880	530	152	2,3	880	660	152	2,3	880	780	151	2,3
	2	355	1410	780	243	5	1410	980	242	5	1400	1180	241	4,9
	3	398	1560	900	268	5,8	1550	1120	267	5,7	1540	1340	266	5,7
63	1	269	1350	700	232	4,8	1340	850	231	4,8	1340	990	230	4,8
	2	398	1920	1030	330	8	1910	1260	329	7,9	1900	1480	328	7,9
	3	550	2650	1490	456	11	2640	1820	455	10,9	2630	2140	453	10,9
64	1	328	1600	870	275	5,9	1590	1050	274	5,8	1590	1230	273	5,8
	2	468	2220	1200	381	7,1	2210	1480	380	7,1	2200	1750	379	7
	3	660	3030	1720	522	9,8	3020	2120	520	9,8	3010	2520	518	9,7
65	1	550	2410	1220	414	7,2	2400	1510	413	7,2	2390	1790	411	7,1
	2	660	2840	1460	489	9,7	2830	1840	487	9,6	2820	2220	485	9,6
	3	760	3280	1800	565	12,1	3270	2250	563	12,1	3260	2690	561	12

Mod.	Speed	Qa [m ³ /h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	910	910	156	4,1	1020	1020	176	5,1
	2	295	1080	1080	186	5,3	1220	1220	210	6,6
	3	367	1320	1320	226	7,7	1500	1500	257	9,5
62	1	269	1060	1030	182	3,2	1250	1250	215	4,3
	2	355	1400	1380	241	4,9	1620	1620	278	6,4
	3	398	1550	1550	266	5,7	1780	1780	306	7,4
63	1	269	1330	1140	229	4,7	1340	1280	230	4,7
	2	398	1900	1710	326	7,8	1940	1940	334	8,1
	3	550	2620	2460	451	10,8	2760	2760	474	11,6
64	1	328	1580	1410	271	5,8	1700	1680	292	6,6
	2	468	2190	2020	377	7	2370	2370	408	8
	3	660	3000	2910	516	9,6	3330	3330	573	11,5
65	1	550	2380	2080	410	7,1	2610	2550	448	8,3
	2	660	2810	2580	484	9,5	3120	3120	537	11,4
	3	760	3250	3130	559	11,9	3650	3650	628	14,6

Qa Air flow

Pt Total capacity

Ps Sensible capacity

Qw Water flow

Δp Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
COOLINGWATER TEMPERATURE:
13/18 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	320	320	56	0,7	450	450	77	1,2	570	570	99	1,8
	2	295	360	360	63	0,8	510	510	88	1,5	710	710	123	2,6
	3	367	430	430	74	1,1	610	610	104	2	890	890	153	3,9
62	1	269	400	330	68	0,5	550	510	95	1	700	700	121	1,5
	2	355	480	400	82	0,7	670	670	115	1,3	860	860	148	2
	3	398	510	470	88	0,8	720	720	124	1,4	1010	1010	173	2,6
63	1	269	510	350	88	0,9	640	520	110	1,4	800	760	138	2
	2	398	640	510	110	1,3	920	840	158	2,3	1220	1220	210	3,7
	3	550	840	770	145	1,8	1350	1280	233	3,8	1720	1720	297	5,5
64	1	328	580	440	100	0,9	790	680	136	1,6	1000	980	171	2,5
	2	468	750	600	129	1	1040	990	178	1,8	1450	1450	249	3,3
	3	660	960	890	166	1,4	1560	1520	268	3,1	2040	2040	351	4,9
65	1	550	790	500	136	1	1100	880	190	1,8	1590	1450	274	3,5
	2	660	900	650	155	1,3	1460	1250	251	3	1910	1900	329	4,8
	3	760	1020	870	175	1,6	1710	1590	295	3,9	2230	2230	385	6,2

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
61	1	225	740	740	127	2,8	890	890	153	3,9
	2	295	900	900	154	3,8	1060	1060	183	5,1
	3	367	1100	1100	189	5,6	1300	1300	224	7,4
62	1	269	850	850	146	2,1	1080	1080	186	3,3
	2	355	1180	1180	203	3,6	1400	1400	242	4,9
	3	398	1300	1300	225	4,2	1550	1550	267	5,7
63	1	269	1010	1010	173	2,9	1170	1170	202	3,7
	2	398	1470	1470	252	5	1700	1700	293	6,4
	3	550	2070	2070	357	7,4	2410	2410	416	9,3
64	1	328	1210	1210	208	3,5	1480	1480	255	5,1
	2	468	1770	1770	305	4,7	2070	2070	357	6,3
	3	660	2480	2480	427	6,9	2910	2910	501	9
65	1	550	1940	1940	335	4,9	2280	2280	392	6,5
	2	660	2330	2330	400	6,8	2720	2720	469	8,9
	3	760	2720	2720	468	8,7	3190	3190	549	11,4

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
HEATINGWATER TEMPERATURE:
45/40 °C

Mod.	Speed	Qa [m ³ /h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	1870	327	14	1730	301	12,2	1590	276	10,5
	2	295	2270	396	18,9	2100	366	16,5	1920	335	14,2
	3	367	2770	482,9	28	2560	445,3	24,3	2340	408	20,9
62	1	269	2260	394	12,1	2090	364	10,4	1910	333	8,9
	2	355	2800	488	16,9	2580	450	14,6	2370	413	12,5
	3	398	3100	540	21,2	2860	498	18,2	2620	456	15,5
63	1	269	2460	429	12,9	2270	396	11,3	2090	364	9,7
	2	398	3450	601	21,3	3190	555	18,7	2930	510	16,2
	3	550	4820	839	23,5	4450	775	20,9	4080	711	18,5
64	1	328	3040	529	19	2810	489	16,4	2580	449	14
	2	468	4070	709	22,1	3750	654	19,2	3440	600	16,4
	3	660	5800	1010	27,6	5350	932	24,1	4910	855	20,8
65	1	550	4830	841	25,8	4460	777	22,4	4090	712	19,2
	2	660	5830	1015	34,4	5380	937	29,9	4930	860	25,7
	3	760	6400	1114	39,6	5910	1029	34,4	5420	943	29,6

Mod.	Speed	Qa [m ³ /h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	1440	251	8,9	1300	226	7,4
	2	295	1750	305	12	1580	274	10
	3	367	2130	371	17,7	1920	334,1	14,8
62	1	269	1740	303	7,5	1570	273	6,2
	2	355	2150	375	10,5	1940	338	8,7
	3	398	2380	415	13,1	2150	374	10,8
63	1	269	1910	332	8,3	1720	300	7
	2	398	2670	465	13,9	2410	420	11,7
	3	550	3720	648	16,1	3360	585	13,8
64	1	328	2350	409	11,7	2120	369	9,7
	2	468	3140	547	13,9	2830	493	11,5
	3	660	4470	779	17,7	4030	702	14,9
65	1	550	3720	649	16,3	3360	585	13,6
	2	660	4490	782	21,8	4050	706	18,2
	3	760	4930	859	25,1	4450	774	20,9

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
HEATINGWATER TEMPERATURE:
50/45 °C

Mod.	Speed	Qa [m³/h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	2220	388	18,4	2080	363	16,4	1930	337	14,4
	2	295	2700	472	24,9	2520	441	22,1	2350	410	19,5
	3	367	3290	575	37	3080	537	32,9	2860	500	29
62	1	269	2680	468	16,3	2500	437	14,4	2330	407	12,6
	2	355	3320	580	22,9	3100	542	20,2	2890	504	17,7
	3	398	3680	642	28,7	3430	599	25,3	3190	557	22,1
63	1	269	2900	507	16,5	2710	474	14,8	2530	441	13,1
	2	398	4080	712	27,2	3810	665	24,3	3550	619	21,6
	3	550	5690	993	28,2	5320	928	25,6	4950	864	23,2
64	1	328	3590	626	25,6	3350	585	22,6	3120	545	19,8
	2	468	4810	839	29,5	4490	784	26,1	4180	730	22,9
	3	660	6870	1198	35,9	6420	1119	32	5970	1041	28,3
65	1	550	5710	997	34	5340	932	30,2	4970	867	26,6
	2	660	6900	1204	45,4	6450	1125	40,3	6000	1047	35,5
	3	760	7580	1323	52,2	7080	1236	46,4	6590	1150	40,8

Mod.	Speed	Qa [m³/h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	1790	312	12,6	1650	287	10,9
	2	295	2170	379	17,1	2000	349	14,8
	3	367	2650	462	25,3	2440	425	21,9
62	1	269	2160	376	10,9	1980	346	9,4
	2	355	2670	466	15,4	2460	429	13,2
	3	398	2960	516	19,2	2720	474	16,5
63	1	269	2340	409	11,5	2160	377	10
	2	398	3290	573	19	3030	529	16,6
	3	550	4590	800	20,8	4220	737	18,5
64	1	328	2890	505	17,1	2660	465	14,7
	2	468	3870	676	20	3570	622	17,2
	3	660	5530	965	24,8	5090	888	21,5
65	1	550	4600	803	23,2	4240	739	20
	2	660	5560	970	31	5110	892	26,8
	3	760	6100	1064	35,7	5620	980	30,9

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
HEATINGWATER TEMPERATURE:
60/50 °C

Mod.	Speed	Qa [m ³ /h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	2780	244	7,9	2630	230	7,2	2490	218	6,5
	2	295	3370	295	10,7	3190	279	9,7	3010	264	8,8
	3	367	4100	359	15,7	3880	340	14,3	3660	321	12,9
62	1	269	3370	295	6,8	3190	279	6,2	3010	263	5,5
	2	355	4170	365	9,6	3940	345	8,6	3720	326	7,8
	3	398	4600	403	11,9	4360	381	10,8	4110	360	9,7
63	1	269	3700	323	7,4	3500	306	6,8	3310	290	6,2
	2	398	5170	452	12,3	4900	429	11,2	4630	405	10,2
	3	550	7190	629	13,6	6810	596	12,6	6440	563	11,6
64	1	328	4550	398	10,8	4310	377	9,8	4070	356	8,8
	2	468	6080	532	12,6	5750	503	11,4	5430	476	10,3
	3	660	8640	756	15,7	8180	716	14,3	7730	676	13
65	1	550	7210	631	14,7	6820	597	13,3	6440	564	12
	2	660	8690	760	19,6	8220	720	17,8	7770	680	16,1
	3	760	9530	834	22,5	9020	789	20,4	8520	745	18,5

Mod.	Speed	Qa [m ³ /h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	2340	205	5,9	2190	192	5,2
	2	295	2830	248	7,9	2660	233	7,1
	3	367	3450	302	11,6	3230	283	10,4
62	1	269	2830	248	5	2660	232	4,4
	2	355	3500	306	6,9	3280	287	6,2
	3	398	3870	338	8,6	3630	317	7,7
63	1	269	3120	273	5,6	2930	257	5
	2	398	4360	382	9,2	4100	358	8,3
	3	550	6060	530	10,6	5690	498	9,7
64	1	328	3840	336	7,9	3600	315	7
	2	468	5120	448	9,3	4800	420	8,3
	3	660	7270	637	11,7	6830	597	10,5
65	1	550	6070	531	10,8	5690	498	9,7
	2	660	7310	640	14,4	6860	600	12,9
	3	760	8020	701	16,6	7520	658	14,8

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

TECHNICAL DATA

2 PIPE SYSTEM PERFORMANCE DATA

LIGHT 61-65
HEATINGWATER TEMPERATURE:
70/60 °C

Mod.	Speed	Qa [m³/h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	3490	306	11,3	3330	293	10,4	3190	280	9,6
	2	295	4230	371	15,2	4050	355	14,1	3860	340	13
	3	367	5150	453	22,6	4930	433	20,9	4710	413	19,3
62	1	269	4210	370	10,1	4030	354	9,3	3850	338	8,5
	2	355	5220	458	14,1	4990	438	13	4760	418	12
	3	398	5770	506	17,7	5520	484	16,3	5270	462	15
63	1	269	4580	402	10,2	4380	385	9,5	4190	368	8,8
	2	398	6420	564	16,7	6150	540	15,5	5870	516	14,4
	3	550	8960	786	16,9	8570	753	15,9	8190	719	15
64	1	328	5660	497	16	5410	475	14,7	5170	454	13,5
	2	468	7570	665	18,3	7240	636	16,9	6920	607	15,5
	3	660	10790	947	22	10320	907	20,4	9860	866	18,9
65	1	550	8990	789	21	8600	755	19,4	8210	721	17,9
	2	660	10840	952	28	10380	911	25,9	9910	870	23,9
	3	760	11900	1045	32,1	11390	1000	29,7	10880	955	27,4

Mod.	Speed	Qa [m³/h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
61	1	225	3040	267	8,9	2890	254	8,1
	2	295	3690	324	12	3510	308	11
	3	367	4490	394	17,7	4270	375	16,3
62	1	269	3670	322	7,8	3490	307	7,1
	2	355	4540	399	11	4320	380	10
	3	398	5020	441	13,7	4780	420	12,5
63	1	269	4000	351	8,1	3800	334	7,5
	2	398	5600	492	13,3	5330	468	12,3
	3	550	7810	686	14	7430	653	13,1
64	1	328	4930	433	12,4	4690	412	11,3
	2	468	6600	579	14,2	6280	551	13
	3	660	9400	826	17,4	8950	786	16
65	1	550	7830	688	16,5	7450	655	15,1
	2	660	9450	830	22	8990	790	20,1
	3	760	10370	911	25,2	9870	867	23,1

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
COOLINGWATER TEMPERATURE:
5/10 °C

Mod.	Speed	Qa [m ³ /h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	1980	980	339	14,1	1970	1130	338	14	1970	1270	337	14
	2	295	2350	1190	403	21,1	2340	1370	402	21	2340	1550	401	20,9
	3	367	2850	1480	489	25,3	2840	1700	488	25,2	2840	1920	486	25
82	1	269	2310	1090	396	14,6	2300	1260	394	14,5	2290	1410	393	14,4
	2	355	2950	1390	507	17,4	2940	1600	505	17,3	2930	1810	503	17,2
	3	398	3380	1600	579	20,3	3360	1850	577	20,2	3350	2090	575	20,1
83	1	269	2330	1110	400	14,6	2320	1270	399	14,5	2320	1430	397	14,4
	2	398	3130	1510	536	20,5	3120	1740	535	20,3	3110	1970	533	20,2
	3	550	4180	2040	717	24,7	4170	2360	715	24,5	4160	2670	712	24,4
83C	1	269	2360	1140	405	20,5	2350	1290	403	20,3	2340	1440	401	20,2
	2	398	3620	1760	621	26,9	3610	2000	618	26,7	3590	2240	616	26,5
	3	550	4720	2320	808	31	4700	2650	805	30,8	4680	2970	802	30,6
84	1	328	2940	1420	505	17,5	2930	1630	503	17,4	2920	1830	501	17,3
	2	468	3810	1860	653	24,8	3790	2140	650	24,7	3780	2420	648	24,5
	3	660	4810	2370	824	30,7	4790	2740	822	30,5	4780	3110	819	30,4
84C	1	328	3190	1540	546	23,9	3170	1750	544	23,7	3160	1960	541	23,5
	2	468	4170	2040	715	31	4160	2330	712	30,8	4140	2610	709	30,5
	3	660	5450	2700	934	40	5430	3100	931	39,8	5410	3480	927	39,5

Mod.	Speed	Qa [m ³ /h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	1960	1410	336	13,9	1950	1550	335	13,8
	2	295	2330	1720	399	20,8	2320	1890	398	20,7
	3	367	2830	2140	485	24,9	2820	2350	484	24,8
82	1	269	2280	1570	391	14,2	2270	1720	390	14,1
	2	355	2920	2010	501	17,1	2910	2220	499	17
	3	398	3340	2330	573	20	3330	2560	571	19,9
83	1	269	2310	1590	395	14,3	2300	1740	394	14,2
	2	398	3100	2190	531	20,1	3090	2410	529	20
	3	550	4140	2980	710	24,2	4130	3280	708	24,1
83C	1	269	2330	1590	399	20	2320	1730	397	19,8
	2	398	3580	2470	613	26,3	3560	2700	611	26,1
	3	550	4660	3280	799	30,4	4640	3600	796	30,2
84	1	328	2910	2030	499	17,1	2900	2230	497	17
	2	468	3770	2690	646	24,4	3760	2960	644	24,2
	3	660	4760	3480	817	30,2	4750	3840	814	30,1
84C	1	328	3150	2150	539	23,3	3130	2350	537	23,1
	2	468	4120	2880	706	30,3	4110	3150	704	30,1
	3	660	5390	3860	924	39,3	5370	4220	921	39

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
COOLINGWATER TEMPERATURE:
7/12 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	1650	840	283	10,2	1640	980	282	10,1	1640	1120	281	10,1
	2	295	1960	1030	336	15,2	1950	1200	335	15,2	1950	1370	334	15,1
	3	367	2370	1290	407	18,3	2360	1500	405	18,2	2360	1710	404	18,1
82	1	269	1940	920	333	10,5	1920	1080	330	10,3	1910	1220	327	10,1
	2	355	2430	1150	417	12,1	2420	1350	415	12	2410	1550	414	12
	3	398	2780	1330	476	14,2	2770	1560	475	14,1	2760	1790	474	14
83	1	269	1960	940	337	10,5	1940	1090	334	10,3	1930	1240	331	10,2
	2	398	2570	1270	442	14,2	2560	1490	440	14,1	2560	1700	439	14,1
	3	550	3430	1720	589	17,2	3420	2020	587	17,1	3410	2320	585	17
83C	1	269	2030	980	348	15,4	2020	1140	347	15,3	2010	1290	346	15,2
	2	398	3080	1520	528	19,8	3040	1750	522	19,4	3010	1970	516	19,1
	3	550	3920	1970	673	22,3	3910	2290	671	22,2	3900	2610	670	22,1
84	1	328	2440	1200	420	12,4	2430	1400	416	12,2	2410	1580	413	12
	2	468	3130	1570	537	17,3	3120	1840	535	17,2	3110	2100	534	17,1
	3	660	3930	2000	675	21,4	3920	2350	673	21,3	3910	2700	671	21,2
84C	1	328	2740	1350	471	18	2720	1550	466	17,7	2690	1740	461	17,4
	2	468	3500	1750	600	22,4	3480	2020	598	22,2	3470	2300	596	22,2
	3	660	4500	2300	773	28,4	4490	2680	771	28,3	4480	3050	770	28,2

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	1630	1250	280	10	1630	1380	279	10
	2	295	1940	1540	333	15	1930	1700	332	14,9
	3	367	2350	1920	403	18	2340	2130	402	17,9
82	1	269	1890	1370	324	10	1880	1510	322	9,9
	2	355	2410	1750	414	12	2400	1940	413	11,9
	3	398	2750	2020	472	14	2740	2240	470	13,9
83	1	269	1910	1390	328	10	1900	1540	326	9,9
	2	398	2550	1910	438	14	2540	2120	436	13,9
	3	550	3400	2610	584	17	3390	2900	582	16,9
83C	1	269	2000	1430	343	15	1980	1570	340	14,7
	2	398	3000	2200	515	19	2990	2430	513	18,9
	3	550	3890	2920	668	22	3880	3230	666	21,9
84	1	328	2400	1780	412	12	2390	1970	411	11,9
	2	468	3100	2360	532	17	3090	2620	530	16,9
	3	660	3900	3050	669	21	3890	3390	668	20,9
84C	1	328	2660	1930	456	17	2630	2120	452	16,7
	2	468	3460	2570	594	22	3450	2840	591	21,8
	3	660	4470	3420	767	28	4460	3780	765	27,9

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
COOLINGWATER TEMPERATURE:
9/14 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	1300	710	223	6,7	1290	840	222	6,7	1290	970	221	6,7
	2	295	1540	880	264	9,9	1530	1040	263	9,9	1530	1200	263	9,9
	3	367	1860	1100	319	12	1850	1300	319	12	1850	1510	318	11,9
82	1	269	1480	730	254	6,3	1470	880	253	6,2	1470	1020	252	6,2
	2	355	1900	930	326	7,7	1890	1120	325	7,6	1880	1310	324	7,6
	3	398	2160	1080	372	9	2160	1310	371	9	2150	1530	370	8,9
83	1	269	1490	740	257	6,3	1490	890	256	6,3	1480	1040	255	6,2
	2	398	2010	1040	345	9	2000	1250	344	8,9	1990	1450	343	8,9
	3	550	2670	1410	459	11	2660	1700	457	10,9	2650	1990	456	10,9
83C	1	269	1560	790	269	9,4	1560	930	267	9,3	1550	1070	266	9,2
	2	398	2380	1240	410	12,5	2380	1460	408	12,4	2370	1680	407	12,3
	3	550	3070	1640	528	14,5	3060	1940	527	14,4	3050	2240	525	14,3
84	1	328	1890	980	325	7,7	1880	1170	323	7,7	1880	1360	322	7,6
	2	468	2440	1290	419	11	2430	1550	418	10,9	2420	1800	416	10,8
	3	660	3060	1650	525	13,6	3050	1990	524	13,5	3040	2320	523	13,5
84C	1	328	2110	1090	362	11,1	2100	1280	360	11	2090	1470	359	10,9
	2	468	2730	1440	470	14,3	2720	1710	468	14,3	2710	1970	466	14,2
	3	660	3530	1930	607	18,5	3520	2280	605	18,3	3510	2640	603	18,2

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	1280	1100	221	6,6	1280	1230	220	6,6
	2	295	1520	1360	262	9,8	1520	1520	261	9,8
	3	367	1840	1710	317	11,9	1840	1840	316	11,8
82	1	269	1460	1160	251	6,2	1450	1300	250	6,1
	2	355	1880	1500	322	7,5	1870	1680	321	7,5
	3	398	2140	1740	368	8,9	2140	1960	367	8,8
83	1	269	1480	1180	254	6,2	1470	1320	253	6,1
	2	398	1990	1660	342	8,8	1980	1860	341	8,8
	3	550	2650	2270	455	10,8	2640	2540	454	10,8
83C	1	269	1540	1210	265	9,2	1540	1350	264	9,1
	2	398	2360	1900	405	12,2	2350	2120	404	12,1
	3	550	3040	2540	523	14,2	3030	2830	521	14,1
84	1	328	1870	1540	321	7,6	1860	1720	320	7,5
	2	468	2410	2050	415	10,8	2410	2300	414	10,7
	3	660	3030	2650	521	13,4	3020	2980	520	13,3
84C	1	328	2080	1660	358	10,8	2070	1850	356	10,8
	2	468	2700	2220	465	14,1	2690	2470	463	14
	3	660	3500	2990	601	18,1	3480	3330	599	18

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
COOLINGWATER TEMPERATURE:
11/16 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	950	580	163	3,9	940	700	162	3,9	940	830	162	3,9
	2	295	1130	720	195	5,8	1130	880	194	5,8	1120	1030	194	5,8
	3	367	1370	920	236	7,1	1370	1110	235	7,1	1360	1300	235	7,1
82	1	269	850	470	146	2,3	850	590	146	2,2	840	710	145	2,2
	2	355	1350	700	232	4,1	1340	880	231	4,1	1340	1060	230	4,1
	3	398	1550	830	267	4,9	1550	1040	266	4,9	1540	1240	265	4,9
83	1	269	860	480	148	2,3	860	600	147	2,3	850	730	147	2,2
	2	398	1440	810	247	4,9	1430	1010	247	4,8	1430	1200	246	4,8
	3	550	1930	1120	332	6,2	1920	1390	331	6,1	1920	1650	330	6,1
83C	1	269	1130	620	195	5,1	1130	750	194	5,1	1120	880	193	5
	2	398	1750	990	302	7,1	1750	1200	301	7,1	1740	1420	300	7
	3	550	2270	1330	390	8,5	2260	1610	389	8,4	2250	1900	388	8,4
84	1	328	1330	750	229	4,1	1330	930	229	4	1320	1110	228	4
	2	468	1760	1020	302	6	1750	1260	301	6	1750	1500	300	6
	3	660	2210	1310	381	7,7	2210	1630	380	7,6	2200	1940	379	7,6
84C	1	328	1540	870	265	6,2	1540	1050	264	6,2	1530	1230	263	6,2
	2	468	2020	1160	347	8,3	2010	1410	346	8,2	2000	1660	344	8,2
	3	660	2600	1570	447	10,8	2590	1910	446	10,7	2590	2240	445	10,7

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	940	940	161	3,8	1050	1050	181	4,7
	2	295	1120	1120	193	5,7	1270	1270	218	7
	3	367	1360	1360	234	7	1550	1550	266	8,7
82	1	269	1020	960	175	3,1	1230	1230	211	4,4
	2	355	1370	1260	236	4,3	1590	1590	273	5,5
	3	398	1580	1480	272	5,1	1830	1830	314	6,6
83	1	269	1030	980	177	3,1	1240	1240	213	4,4
	2	398	1460	1420	252	5	1690	1690	291	6,5
	3	550	1990	1970	342	6,5	2290	2290	395	8,3
83C	1	269	1120	1020	192	5	1250	1250	215	6,2
	2	398	1730	1630	299	7	1950	1950	336	8,6
	3	550	2250	2180	387	8,3	2580	2580	444	10,5
84	1	328	1360	1310	235	4,2	1580	1580	272	5,5
	2	468	1800	1780	309	6,3	2070	2070	357	8,1
	3	660	2300	2300	396	8,2	2660	2660	457	10,5
84C	1	328	1520	1410	262	6,1	1700	1700	293	7,5
	2	468	1990	1910	343	8,1	2260	2260	390	10,2
	3	660	2620	2610	451	10,9	3010	3010	517	13,8

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
COOLINGWATER TEMPERATURE:
13/18 °C

Mod.	Speed	Qa [m³/h]	Dry bulb 21 °C Wet bulb 19 °C				Dry bulb 23 °C Wet bulb 19 °C				Dry bulb 25 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	330	320	57	0,7	460	460	80	1,2	590	590	102	1,7
	2	295	380	380	65	0,9	530	530	92	1,6	740	740	127	2,8
	3	367	440	440	76	1	630	630	108	1,9	920	920	159	3,6
82	1	269	380	260	66	0,5	540	440	92	1	680	670	118	1,5
	2	355	460	310	80	0,6	650	540	112	1,1	840	830	144	1,7
	3	398	510	370	89	0,7	730	640	126	1,3	960	960	165	2,1
83	1	269	390	270	67	0,5	540	460	93	1	690	690	119	1,5
	2	398	480	400	82	0,7	680	640	117	1,2	890	890	153	2
	3	550	590	530	102	0,8	850	850	146	1,4	1350	1350	232	3,2
83C	1	269	400	310	70	0,8	560	490	96	1,4	710	710	122	2,1
	2	398	570	490	98	0,9	800	770	137	1,7	1170	1170	202	3,4
	3	550	680	660	117	1	1170	1120	202	2,7	1560	1560	269	4,4
84	1	328	470	390	81	0,6	660	620	114	1,1	850	850	146	1,8
	2	468	560	510	96	0,8	800	800	138	1,5	1210	1210	208	3,1
	3	660	650	630	112	0,9	1150	1120	199	2,4	1570	1570	270	4,1
84C	1	328	520	440	90	0,9	730	690	125	1,6	950	950	163	2,6
	2	468	630	580	108	1	910	910	157	2	1370	1370	235	4,1
	3	660	750	750	129	1,2	1380	1360	238	3,6	1820	1820	313	5,7

Mod.	Speed	Qa [m³/h]	Dry bulb 27 °C Wet bulb 19 °C				Dry bulb 29 °C Wet bulb 19 °C			
			Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Ps [W]	Qw [l/h]	Δp [kPa]
81	1	224	760	760	131	2,7	920	920	158	3,6
	2	295	930	930	160	4,1	1100	1100	189	5,5
	3	367	1140	1140	196	5,1	1340	1340	232	6,8
82	1	269	830	830	143	2,1	1060	1060	182	3,4
	2	355	1150	1150	199	3,1	1380	1380	237	4,2
	3	398	1330	1330	229	3,7	1580	1580	273	5
83	1	269	840	840	144	2,2	1070	1070	184	3,4
	2	398	1230	1230	212	3,7	1470	1470	253	5
	3	550	1680	1680	289	4,7	1990	1990	343	6,4
83C	1	269	900	900	155	3,3	1090	1090	188	4,7
	2	398	1450	1450	249	5	1700	1700	293	6,7
	3	550	1910	1910	329	6,2	2250	2250	387	8,2
84	1	328	1140	1140	196	3	1370	1370	236	4,2
	2	468	1510	1510	261	4,6	1800	1800	310	6,2
	3	660	1940	1940	335	6	2310	2310	397	8,1
84C	1	328	1260	1260	217	4,3	1480	1480	256	5,8
	2	468	1680	1680	289	5,9	1970	1970	340	7,9
	3	660	2230	2230	383	8,1	2620	2620	451	10,7

Qa Air flow**Pt** Total capacity**Ps** Sensible capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
HEATINGWATER TEMPERATURE:
45/40 °C

Mod.	Speed	Qa [m³/h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	1180	206	15,5	1090	190	13,3	990	173	11,3
	2	295	1530	267	20	1410	245	17,2	1280	224	14,6
	3	367	1790	313	21,6	1650	288	18,6	1510	263	15,8
82	1	269	1440	251	12,7	1320	230	10,8	1200	209	9
	2	355	1790	312	17	1640	286	14,5	1490	260	12,2
	3	398	2060	358	21,2	1880	328	18,1	1710	299	15,2
83	1	269	1440	251	12,7	1320	230	10,8	1200	209	9
	2	398	2060	358	21,2	1880	328	18,1	1710	299	15,2
	3	550	2620	456	25,8	2400	418	22	2180	380	18,6
83C	1	269	1120	195	19,4	1030	179	16,5	940	163	13,7
	2	398	1570	273	26,4	1440	251	22,4	1310	228	18,7
	3	550	1940	338	32,2	1780	310	27,4	1620	282	22,9
84	1	328	1850	322	17	1700	296	14,5	1540	269	12,2
	2	468	2350	410	26,9	2150	375	22,9	1960	341	19,2
	3	660	2940	512	31,4	2690	469	26,8	2450	426	22,6
84C	1	328	1400	245	23,6	1290	224	20	1170	204	16,7
	2	468	1750	305	33,4	1610	280	28,3	1460	255	23,7
	3	660	2180	380	37,8	2000	349	32,1	1820	317	26,9

Mod.	Speed	Qa [m³/h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	900	157	9,4	810	140	7,7
	2	295	1160	203	12,2	1040	182	10
	3	367	1360	238	13,3	1220	213	10,9
82	1	269	1080	188	7,5	960	168	6
	2	355	1350	234	10	1200	209	8,1
	3	398	1540	269	12,5	1370	239	10,1
83	1	269	1080	188	7,5	960	168	6
	2	398	1540	269	12,5	1370	239	10,1
	3	550	1960	342	15,4	1740	304	12,5
83C	1	269	840	147	11,3	750	131	9
	2	398	1180	206	15,4	1050	183	12,4
	3	550	1460	254	18,8	1300	226	15,2
84	1	328	1390	242	10,1	1240	216	8,1
	2	468	1760	307	15,8	1570	273	12,8
	3	660	2200	383	18,7	1960	341	15,2
84C	1	328	1060	184	13,7	940	164	11
	2	468	1320	230	19,4	1170	204	15,6
	3	660	1640	286	22,1	1460	254	17,8

Qa Air flow**Pt** Total capacity**Qw** Water flow**Δp** Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
HEATINGWATER TEMPERATURE:
50/45 °C

Mod.	Speed	Qa [m³/h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	1420	247	21,4	1320	230	18,8	1230	214	16,4
	2	295	1830	320	27,3	1710	298	24,1	1590	277	21
	3	367	2150	376	29,2	2010	350	25,8	1860	325	22,6
82	1	269	1740	303	17,8	1620	282	15,5	1500	261	13,5
	2	355	2170	378	23,8	2020	352	20,8	1870	326	18,1
	3	398	2490	434	29,7	2310	404	26	2140	374	22,6
83	1	269	1740	303	17,8	1620	282	15,5	1500	261	13,5
	2	398	2490	434	29,7	2310	404	26	2140	374	22,6
	3	550	3170	553	35,7	2950	514	31,4	2730	476	27,3
83C	1	269	1350	236	27,8	1260	220	24,2	1170	204	20,9
	2	398	1900	331	37,5	1760	308	32,8	1630	285	28,4
	3	550	2340	409	45,6	2180	381	39,9	2020	353	34,6
84	1	328	2240	390	23,7	2080	363	20,8	1930	336	18
	2	468	2840	496	37,6	2650	462	33	2450	427	28,6
	3	660	3560	622	43,5	3310	578	38,3	3070	535	33,3
84C	1	328	1690	296	33,6	1580	276	29,3	1460	255	25,4
	2	468	2120	369	47,6	1970	344	41,5	1820	319	35,9
	3	660	2640	460	53,5	2460	429	46,8	2270	397	40,5

Mod.	Speed	Qa [m³/h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	1130	198	14,2	1040	181	12,1
	2	295	1460	256	18,2	1340	234	15,5
	3	367	1720	300	19,6	1580	275	16,8
82	1	269	1380	240	11,6	1260	220	9,8
	2	355	1720	300	15,5	1570	274	13,1
	3	398	1970	344	19,4	1800	314	16,4
83	1	269	1380	240	11,6	1260	220	9,8
	2	398	1970	344	19,4	1800	314	16,4
	3	550	2510	438	23,5	2290	400	20
83C	1	269	1080	188	17,8	980	172	15
	2	398	1510	263	24,2	1380	240	20,5
	3	550	1860	325	29,6	1700	297	25
84	1	328	1770	309	15,5	1620	283	13,1
	2	468	2250	393	24,5	2060	359	20,8
	3	660	2820	492	28,6	2570	449	24,3
84C	1	328	1350	235	21,7	1230	215	18,3
	2	468	1680	293	30,7	1540	268	25,9
	3	660	2090	366	34,7	1910	334	29,3

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
HEATINGWATER TEMPERATURE:
65/55 °C

Mod.	Speed	Qa [m³/h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	1970	173	10,7	1870	164	9,7	1780	156	8,8
	2	295	2550	223	13,6	2420	212	12,5	2300	201	11,3
	3	367	2980	262	14,6	2840	249	13,4	2690	236	12,2
82	1	269	2390	210	8,7	2270	199	7,9	2150	189	7,1
	2	355	2980	261	11,6	2830	248	10,6	2680	235	9,6
	3	398	3420	300	14,5	3240	284	13,2	3070	269	11,9
83	1	269	2390	210	8,7	2270	199	7,9	2150	189	7,1
	2	398	3420	300	14,5	3240	284	13,2	3070	269	11,9
	3	550	4340	381	17,5	4120	361	15,9	3900	342	14,4
83C	1	269	1860	164	13,5	1770	155	12,2	1680	147	11
	2	398	2610	229	18,2	2470	217	16,5	2340	206	14,9
	3	550	3220	282	22,1	3060	268	20,1	2890	254	18,1
84	1	328	3080	270	11,6	2920	256	10,6	2760	242	9,6
	2	468	3900	342	18,4	3700	325	16,7	3510	307	15,1
	3	660	4880	428	21,3	4630	406	19,4	4380	384	17,5
84C	1	328	2330	205	16,3	2220	194	14,8	2100	184	13,3
	2	468	2910	255	23	2760	242	20,8	2610	229	18,8
	3	660	3620	317	25,9	3440	301	23,5	3250	285	21,2

Mod.	Speed	Qa [m³/h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	1680	147	8	1590	139	7,2
	2	295	2170	191	10,2	2050	180	9,2
	3	367	2550	223	11,1	2400	211	10
82	1	269	2030	178	6,4	1910	168	5,7
	2	355	2530	221	8,6	2380	208	7,7
	3	398	2900	254	10,7	2720	239	9,6
83	1	269	2030	178	6,4	1910	168	5,7
	2	398	2900	254	10,7	2720	239	9,6
	3	550	3680	322	13	3460	303	11,6
83C	1	269	1580	139	9,8	1490	131	8,8
	2	398	2210	194	13,3	2080	183	11,9
	3	550	2730	240	16,2	2570	226	14,5
84	1	328	2610	229	8,6	2450	215	7,7
	2	468	3310	290	13,5	3110	273	12,1
	3	660	4130	362	15,8	3880	340	14,1
84C	1	328	1980	174	11,9	1870	164	10,6
	2	468	2470	216	16,8	2320	204	15
	3	660	3070	269	19	2890	253	17

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

TECHNICAL DATA

4 PIPE SYSTEM PERFORMANCE DATA

LIGHT 81-84
HEATINGWATER TEMPERATURE:
70/60 °C

Mod.	Speed	Qa [m ³ /h]	Air temperature 16 °C			Air temperature 18 °C			Air temperature 20 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	2200	194	13	2110	185	12	2010	177	11
	2	295	2850	250	16,5	2720	239	15,3	2600	228	14
	3	367	3340	294	17,6	3200	281	16,3	3050	268	15
82	1	269	2690	237	10,7	2570	226	9,8	2450	215	9
	2	355	3360	295	14,4	3200	281	13,2	3050	268	12
	3	398	3850	338	17,9	3670	323	16,4	3500	307	15
83	1	269	2690	237	10,7	2570	226	9,8	2450	215	9
	2	398	3850	338	17,9	3670	323	16,4	3500	307	15
	3	550	4900	430	21,4	4670	411	19,7	4450	391	18
83C	1	269	2100	184	16,8	2000	176	15,4	1910	168	14,1
	2	398	2930	258	22,7	2800	246	20,8	2670	235	19
	3	550	3630	319	27,5	3460	304	25,2	3300	290	23
84	1	328	3470	304	14,3	3310	291	13,1	3150	277	12
	2	468	4400	387	22,6	4200	369	20,8	4000	351	19
	3	660	5500	483	26,1	5250	461	24	5000	439	22
84C	1	328	2630	231	20,3	2510	220	18,6	2390	210	17
	2	468	3270	288	28,7	3130	275	26,3	2980	262	24
	3	660	4080	358	32,2	3890	342	29,5	3710	326	27

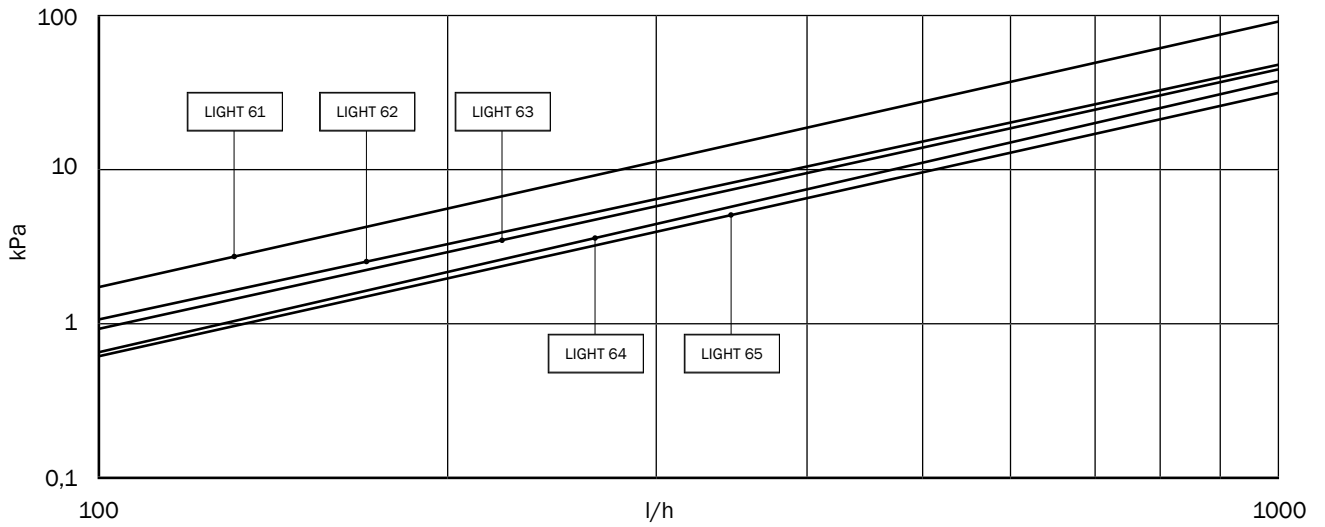
Mod.	Speed	Qa [m ³ /h]	Air temperature 22 °C			Air temperature 24 °C		
			Pt [W]	Qw [l/h]	Δp [kPa]	Pt [W]	Qw [l/h]	Δp [kPa]
81	1	224	1910	168	10	1820	160	9,1
	2	295	2480	218	12,8	2350	207	11,7
	3	367	2900	255	13,7	2760	242	12,5
82	1	269	2330	205	8,2	2210	194	7,4
	2	355	2900	255	11	2750	241	9,9
	3	398	3330	292	13,7	3150	277	12,4
83	1	269	2330	205	8,2	2210	194	7,4
	2	398	3330	292	13,7	3150	277	12,4
	3	550	4230	372	16,5	4010	352	15
83C	1	269	1820	160	12,8	1720	151	11,5
	2	398	2540	223	17,2	2410	212	15,6
	3	550	3140	276	20,9	2980	262	19
84	1	328	2990	263	10,9	2840	249	9,9
	2	468	3800	334	17,3	3600	317	15,7
	3	660	4750	417	20	4500	396	18,2
84C	1	328	2270	200	15,4	2160	190	14
	2	468	2830	249	21,8	2690	236	19,7
	3	660	3530	310	24,5	3350	294	22,2

Qa	Air flow
Pt	Total capacity
Qw	Water flow
Δp	Water pressure drop

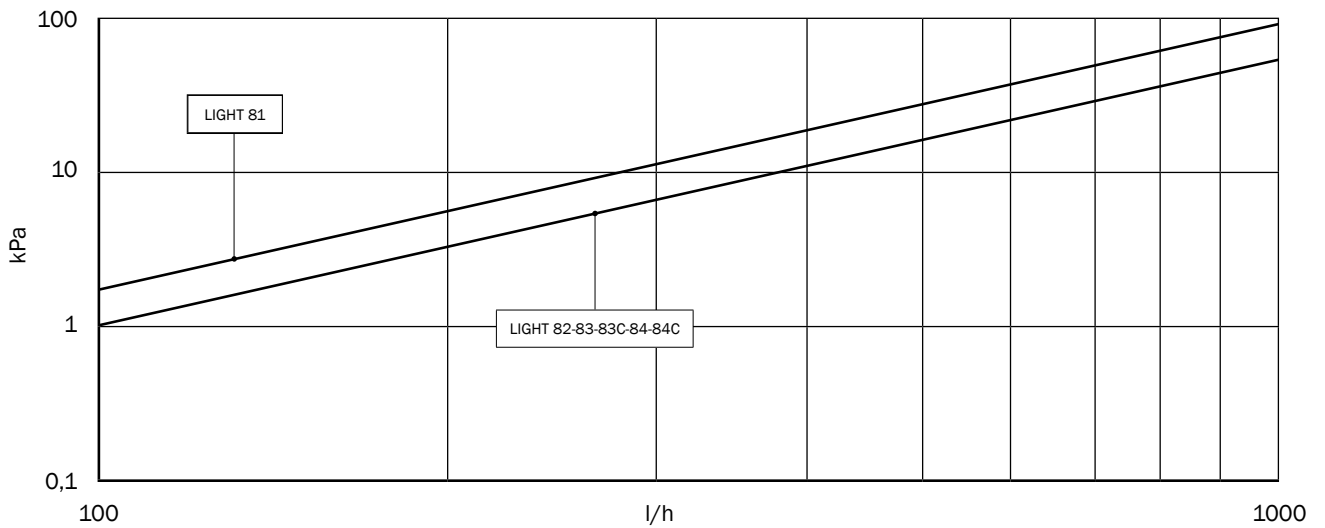
TECHNICAL DATA

COILS WATER PRESSURE DROP

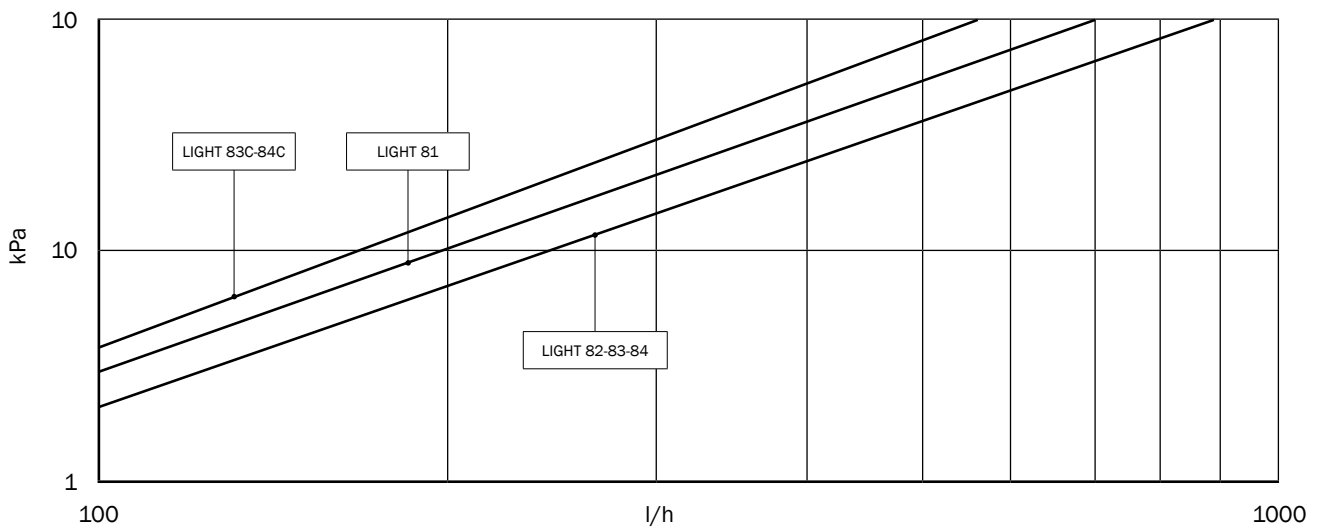
2 PIPE SYSTEM WATER CASSETTE



4 PIPE SYSTEM WATER CASSETTE - MAIN COIL



4 PIPE SYSTEM WATER CASSETTE - AUXILIARY COIL



TECHNICAL DATA

SOUND POWER SPECTRUM (2 PIPE SYSTEM)

Model	Speed	Standard electric wiring	Frequency spectrum - ref. octave band (Hz)						Total sound power [db(A)]	
			125	250	500	1.000	2.000	4.000		8.000
LIGHT 61	1	Min	40	37	31	18	22	15	22	33
	2	Med	44	44	38	27	24	16	21	39
	3	Max	49	50	46	37	30	19	22	46
LIGHT 62	1	Min	40	41	30	19	19	14	21	34
	2	Med	45	47	40	29	24	16	22	41
	3	Max	46	49	44	33	26	17	22	44
LIGHT 63	1	Min	40	41	30	19	19	14	21	34
	2	Med	46	49	44	33	26	17	22	44
	3	Max	53	55	52	44	38	29	23	52
LIGHT 64	1	Min	43	45	37	25	23	15	21	39
	2	Med	50	52	49	40	33	23	22	49
	3	Max	58	59	59	51	45	37	28	58
LIGHT 65	1	Min	55	56	52	47	40	30	24	53
	2	Med	59	60	59	53	47	39	30	59
	3	Max	61	62	62	56	51	43	34	62

SOUND POWER SPECTRUM (4 PIPE SYSTEM)

Model	Speed	Standard electric wiring	Frequency spectrum - ref. octave band (Hz)						Total sound power [db(A)]	
			125	250	500	1.000	2.000	4.000		8.000
LIGHT 81	1	Min	40	37	31	18	22	15	22	33
	2	Med	44	44	38	27	24	16	21	39
	3	Max	49	50	46	37	30	19	22	46
LIGHT 82	1	Min	40	41	30	19	19	14	21	34
	2	Med	45	47	40	29	24	16	22	41
	3	Max	46	49	44	33	26	17	22	44
LIGHT 83	1	Min	40	41	30	19	19	14	21	34
	2	Med	46	49	44	33	26	17	22	44
	3	Max	53	55	52	44	38	29	23	52
LIGHT 83C	1	Min	40	41	30	19	19	14	21	34
	2	Med	46	49	44	33	26	17	22	44
	3	Max	53	55	52	44	38	29	23	52
LIGHT 84	1	Min	43	45	37	25	23	15	21	39
	2	Med	50	52	49	40	33	23	22	49
	3	Max	58	59	59	51	45	37	28	58
LIGHT 84C	1	Min	43	45	37	25	23	15	21	39
	2	Med	50	52	49	40	33	23	22	49
	3	Max	58	59	59	51	45	37	28	58

VALVES

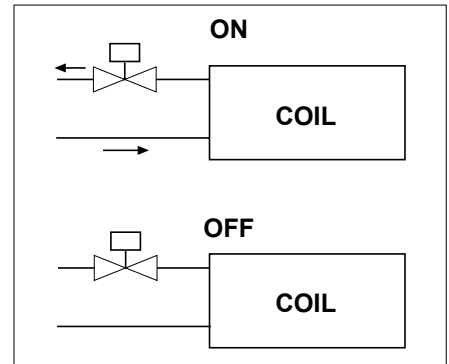
2 WAY VALVE KIT

The valve body is made of brass; the shutter is controlled by an ON/OFF type or modulating electrothermal actuator (NC versions) (power supply 230Vca/24Vca).

During functioning the electrothermal actuator is completely silent.

The kit is provided with valve body, electrothermal actuator, flared copper fittings, ring nuts and gaskets to fix it to the unit. The valve kit is already mounted onto the unit, complete with the water and electrical connections necessary to make the unit work. When placing the order, please specify the unit model and the coil (standard or auxiliary) the kit refers to.

TECHNICAL DATA *	
Max. pressure	16 bar
Fluid min temperature	4 °C
Fluid max temperature	110 °C
Liquids allowed	water with glycol < 50%
Shutter stroke	2,5 mm
Bypass leakage	< 0,02 % Kvs
Actuator attachment	threaded ring M 30 x 1,5

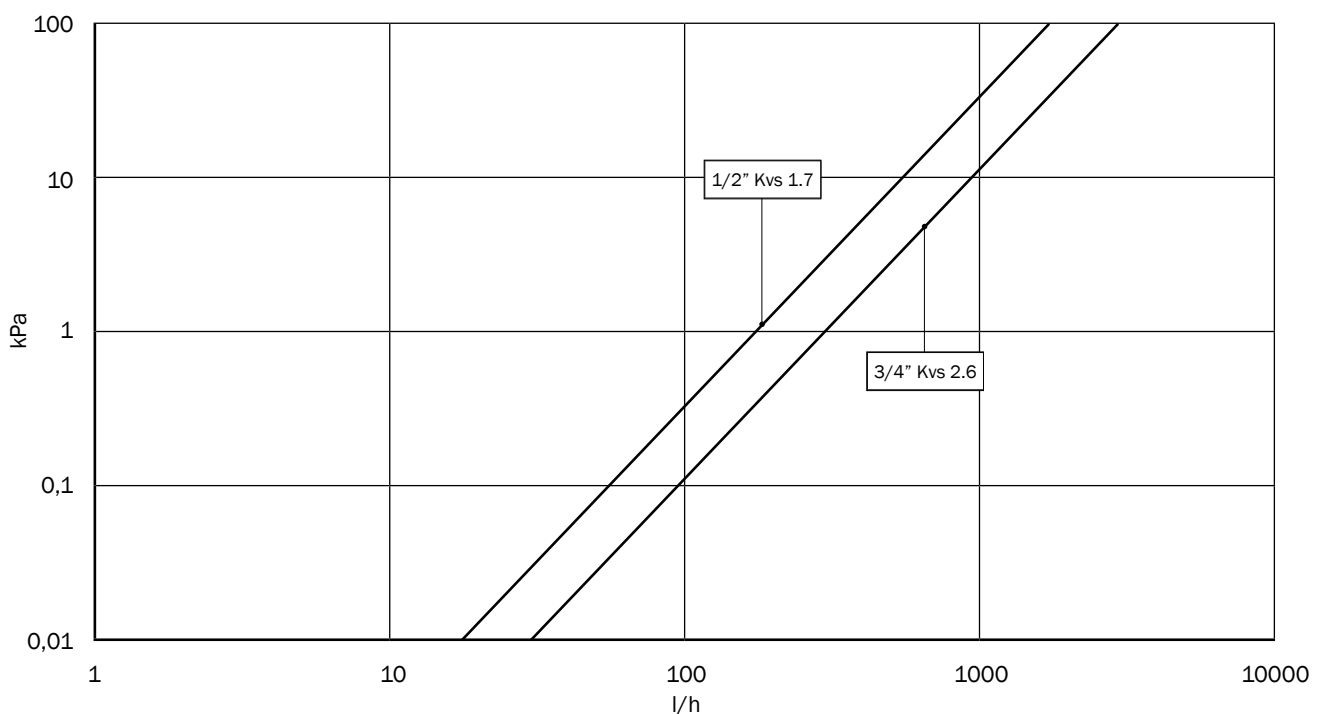


* Technical data refer only to the valve kit.

Technical data of the unit in section TECHNICAL DATA > WORKING LIMITS

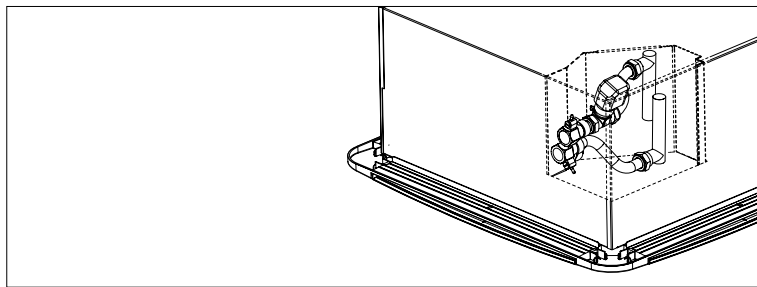
LIGHT	61	62	63	64	65	81	82	83	83C	84	84C
Main coil	2 pipe system					4 pipe system					
Ø valve fittings	1/2"	1/2"	3/4"	3/4"	3/4"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
KVS	1,7	1,7	2,6	2,6	2,6	1,7	1,7	1,7	1,7	1,7	1,7

WATER PRESSUR DROP



VALVES

2 WAY VALVES INSTALLED (2 PIPES SYSTEM)



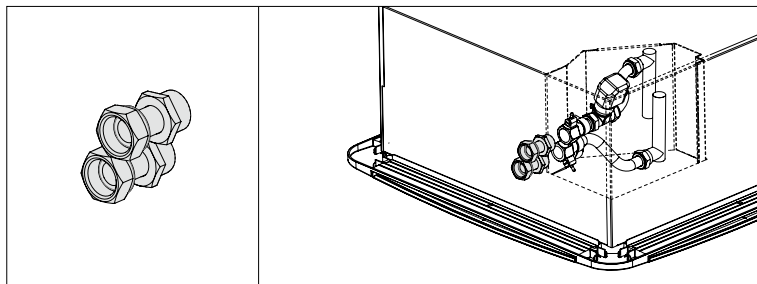
Valves integrated inside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

2 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
61-62	1/2"	A0056LT0212
63-64-65	3/4"	A0056LT0234

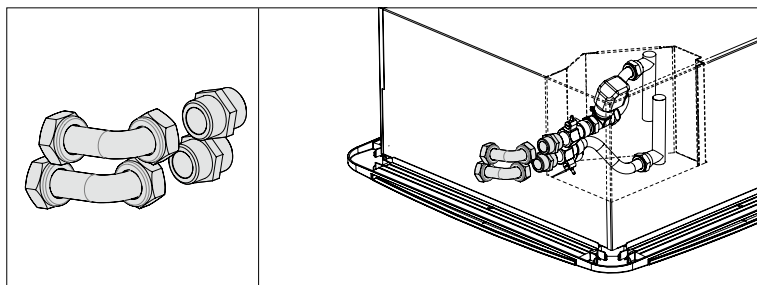
ACCESSORIES (LOOSE)



Description

No. 2 STRAIGHT MALE/FEMALE COPPER TUBE

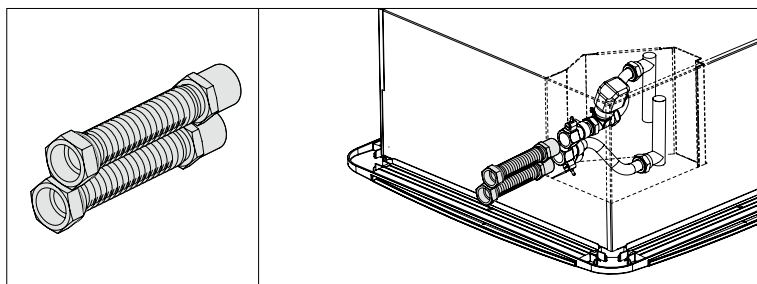
Size	Ø	Code
61-62	1/2"	A0056LT0912
63-64-65	3/4"	A0056LT0934



Description

No. 2 90° MALE/FEMALE COPPER TUBES

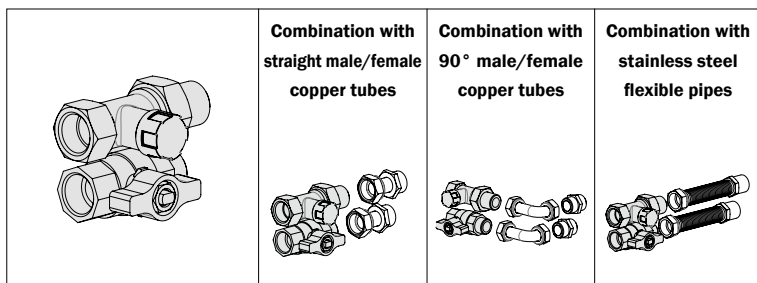
Size	Ø	Code
61-62	1/2"	A0056LT09129
63-64-65	3/4"	A0056LT09349



Description

No. 2 STAINLESS STEEL FLEXIBLE PIPES

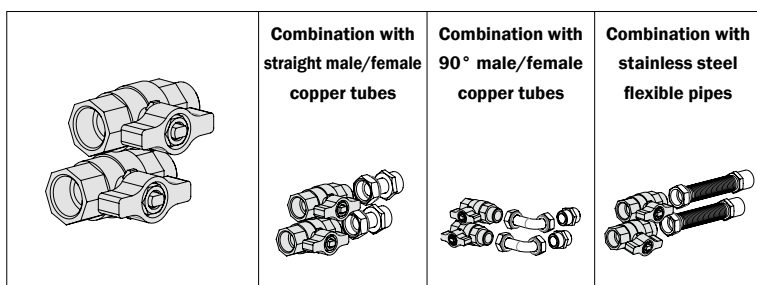
Size	Ø	Code
61-62	1/2"	A0055620043
63-64-65	3/4"	A0055620044



Description

No. 1 SHUT OFF/No. 1 BALANCING VALVE

Size	Ø	Code
61-62	1/2"	A0056CH0512
63-64-65	3/4"	A0056CH0534



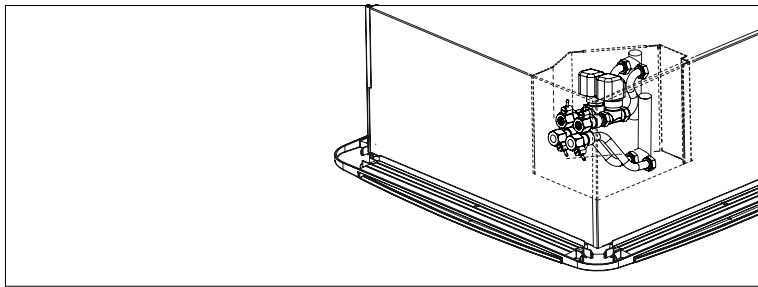
Description

No. 2 SHUT OFF VALVES

Size	Ø	Code
61-62	1/2"	A0056CH0612
63-64-65	3/4"	A0056CH0634

VALVES

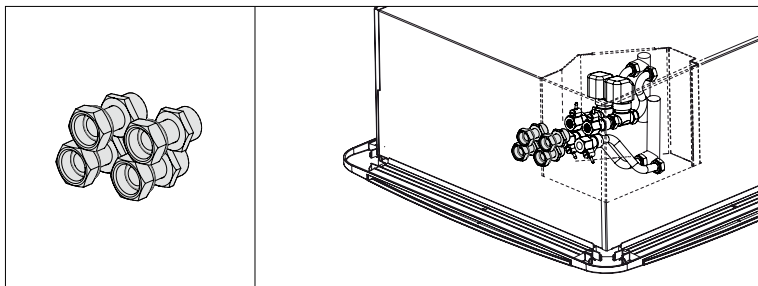
2 WAY VALVES INSTALLED (4 PIPES SYSTEM)



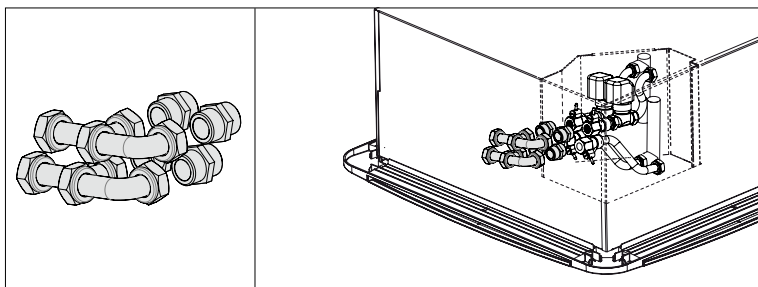
Valves integrated inside the unit. The auxiliary condensate drain pan is supplied as standard.

Description		
2 WAY VALVE (ON/OFF 230 VAC)		
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT02CA

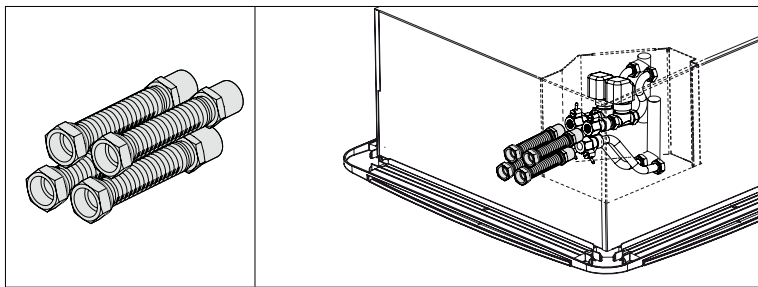
ACCESSORIES (LOOSE)



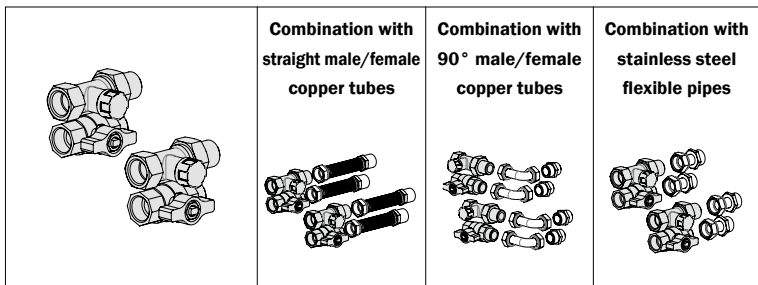
Description		
No. 4 STRAIGHT MALE/FEMALE COPPER TUBE		
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT09CA



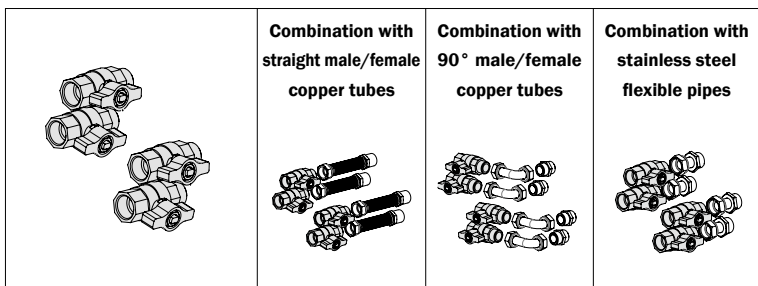
Description		
No. 4 90° MALE/FEMALE COPPER TUBES		
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT09CA9



Description		
No. 4 STAINLESS STEEL FLEXIBLE PIPES		
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0055620045



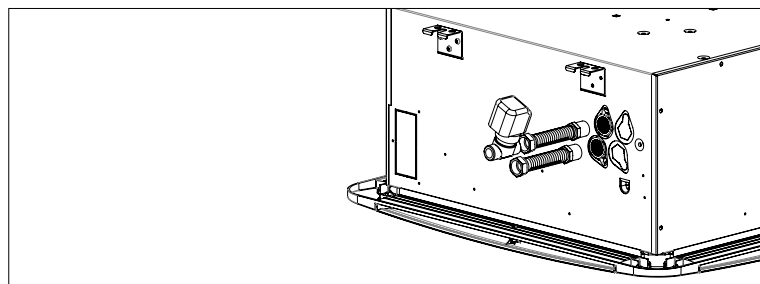
Description		
No. 2 SHUT OFF/No. 2 BALANCING VALVES		
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH05CA



Description		
No. 4 SHUT OFF VALVES		
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH06CA

VALVES

2 WAY VALVES INSTALLED NOT INSTALLED (2 PIPE SYSTEM)



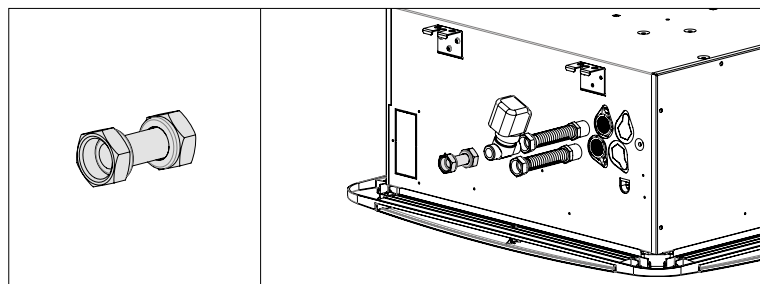
Valves integrated outside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

2 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
61-62	1/2"	A0056LT0213
63-64-65	3/4"	A0056LT0235

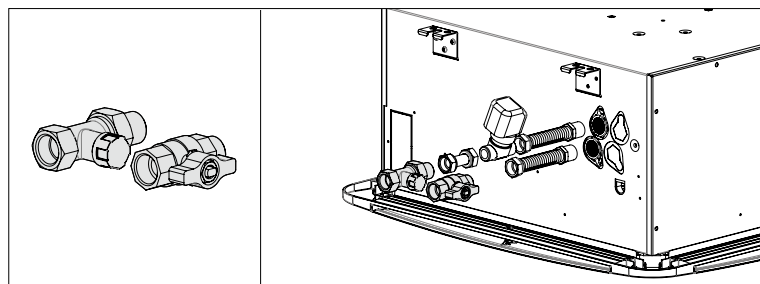
ACCESSORIES (LOOSE)



Description

No. 1 STRAIGHT COPPER TUBE FOR 2-WAY VALVE

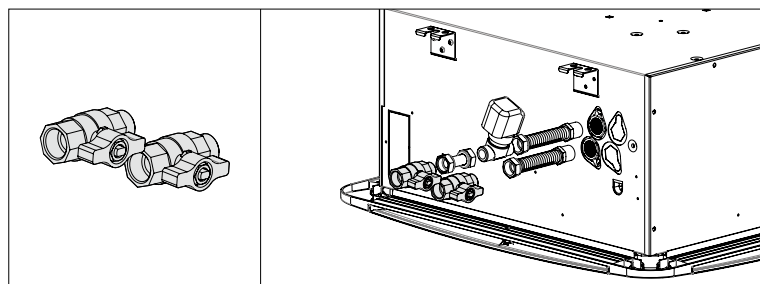
Size	Ø	Code
61-62	1/2"	A0056LT2912
63-64-65	3/4"	A0056LT2934



Description

No. 1 SHUT OFF/No. 1 BALANCING VALVE

Size	Ø	Code
61-62	1/2"	A0056CH0512
63-64-65	3/4"	A0056CH0534



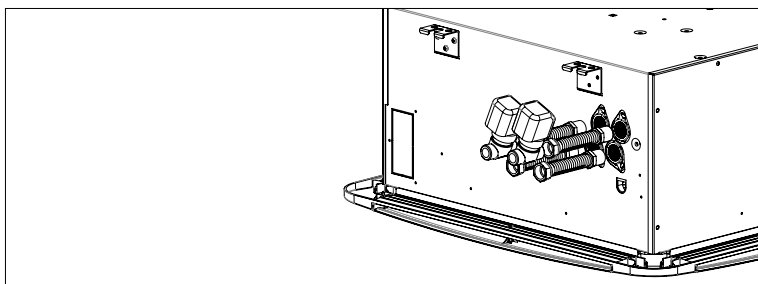
Description

No. 2 SHUT OFF VALVES

Size	Ø	Code
61-62	1/2"	A0056CH0612
63-64-65	3/4"	A0056CH0634

VALVES

2 WAY VALVES INSTALLED NOT INSTALLED (4 PIPE SYSTEM)



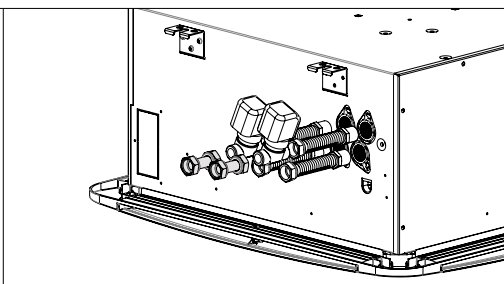
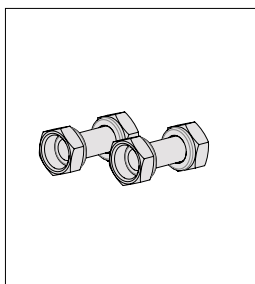
Valves integrated outside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

2 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT02CB

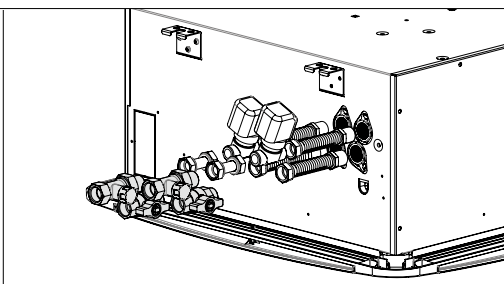
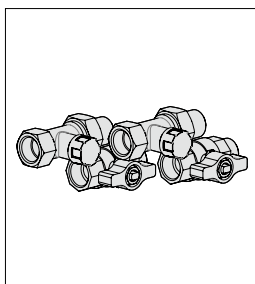
ACCESSORIES (LOOSE)



Description

No. 1 STRAIGHT COPPER TUBE FOR 2-WAY VALVE

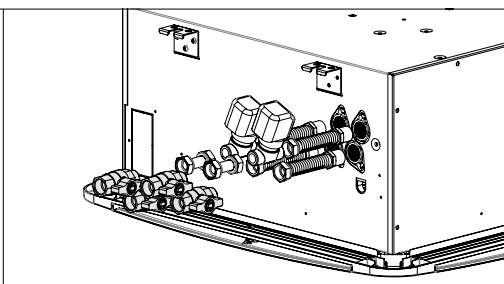
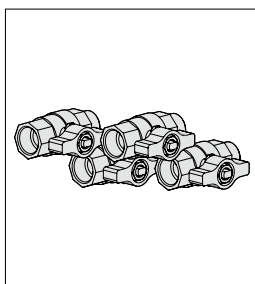
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT29CA



Description

No. 2 SHUT OFF/No. 2 BALANCING VALVES

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH05CA



Description

No. 4 SHUT OFF VALVES

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH06CA

VALVES

3 WAY VALVE KIT

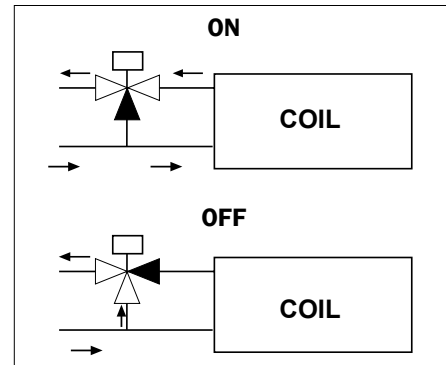
On/Off 3-way valve kits with bypass (4 fittings) are available.

The valve body is made of brass; the shutter is controlled by an ON/OFF electrothermal actuator (230 Vac input).

When there is no power supply, the valve is closed.

During functioning the electrothermal actuator is completely silent. The kit is provided with valve body, electrothermal actuator, flared copper fittings, ring nuts and gaskets to fix it to the unit. The valve kit is already mounted onto the unit, complete with the water and electrical connections necessary to make the unit work. When placing the order, please specify the unit model and the coil (standard or auxiliary) the kit refers to.

TECHNICAL DATA *	
Max. pressure	16 bar
Fluid min temperature	4 °C
Fluid max temperature	110 °C
Liquids allowed	water with glycol < 50%
Shutter stroke	2,5 mm
Bypass leakage	< 0,02 % Kvs
Actuator attachment	ghiera filettata M 30 x 1,5

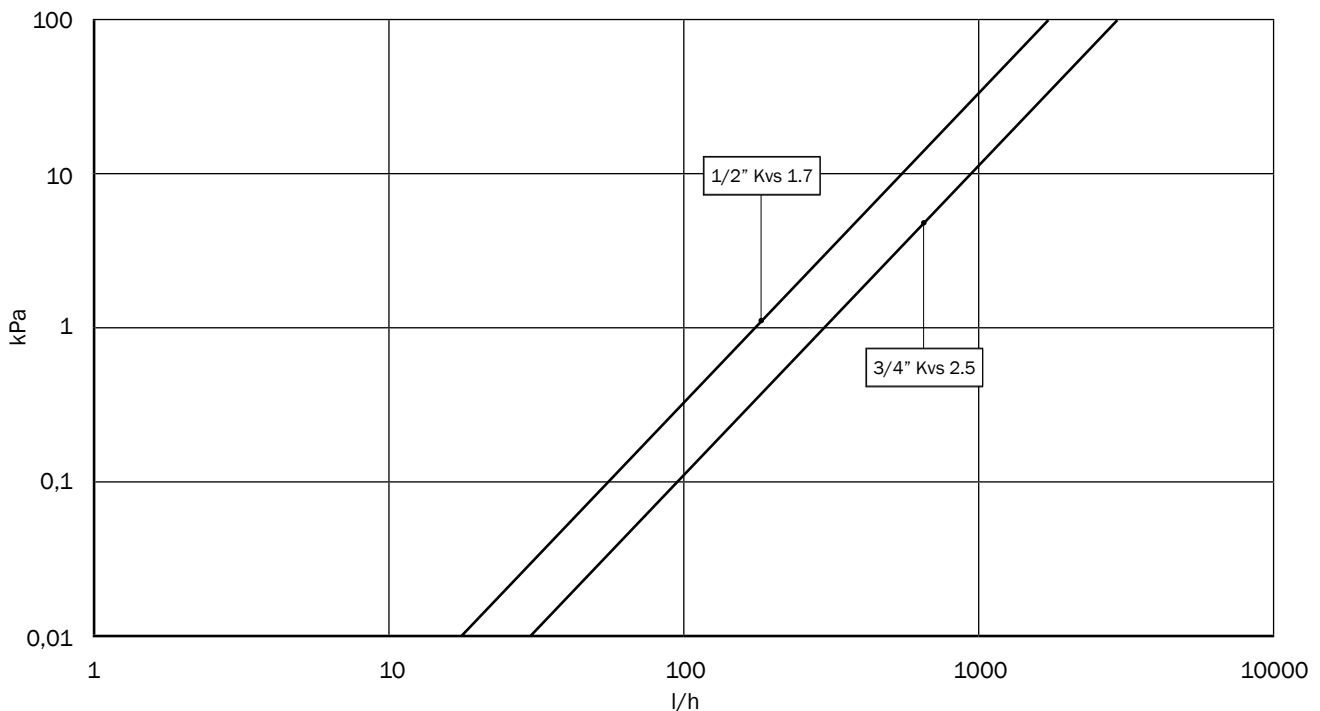


* Technical data refer only to the valve kit.

Technical data of the unit in section TECHNICAL DATA > WORKING LIMITS

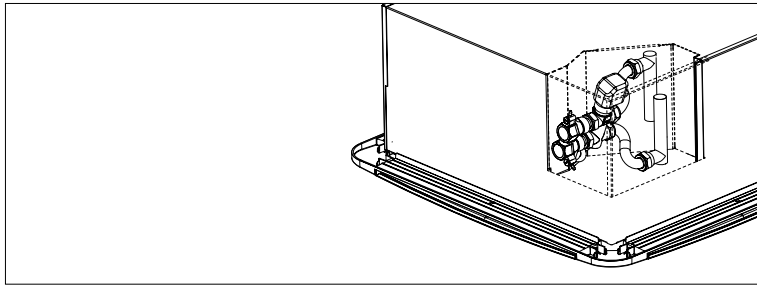
LIGHT	61	62	63	64	65	81	82	83	83C	84	84C
Main coil	2 pipe system					4 pipe system					
Ø valve fittings	1/2"	1/2"	3/4"	3/4"	3/4"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
KVS	1,7	1,7	2,6	2,6	2,6	1,7	1,7	1,7	1,7	1,7	1,7
Auxiliary coil	2 pipe system					4 pipe system					
Ø valve fittings	-	-	-	-	-	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
KVS	-	-	-	-	-	1,7	1,7	1,7	1,7	1,7	1,7

WATER PRESSUR DROP



VALVES

3 WAY VALVES INSTALLED (2 PIPES SYSTEM)



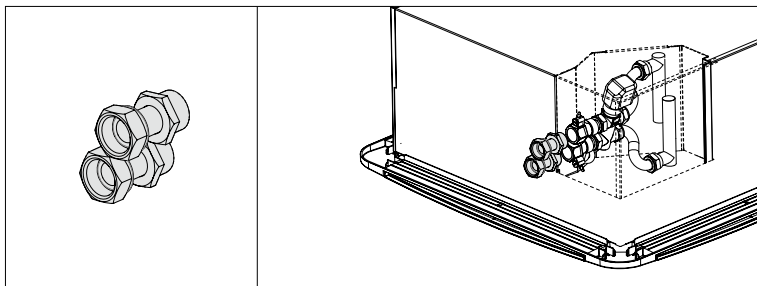
Valves integrated inside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

3 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
61-62	1/2"	A0056LT0312
63-64-65	3/4"	A0056LT0334

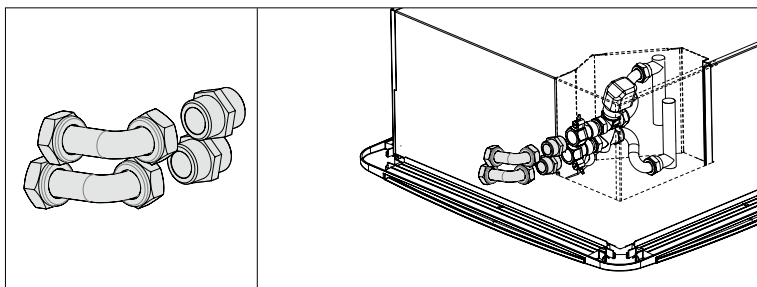
ACCESSORIES (LOOSE)



Description

No. 2 STRAIGHT MALE/FEMALE COPPER TUBE

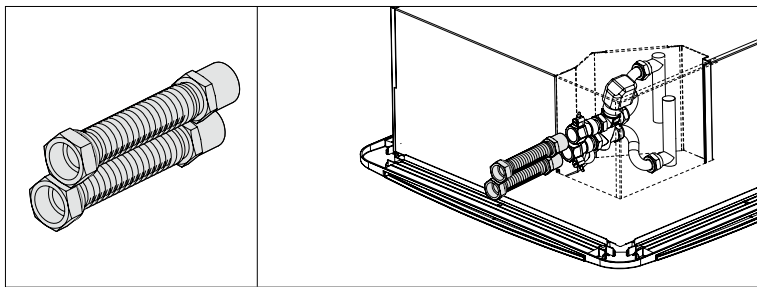
Size	Ø	Code
61-62	1/2"	A0056LT0912
63-64-65	3/4"	A0056LT0934



Description

No. 2 90° MALE/FEMALE COPPER TUBES

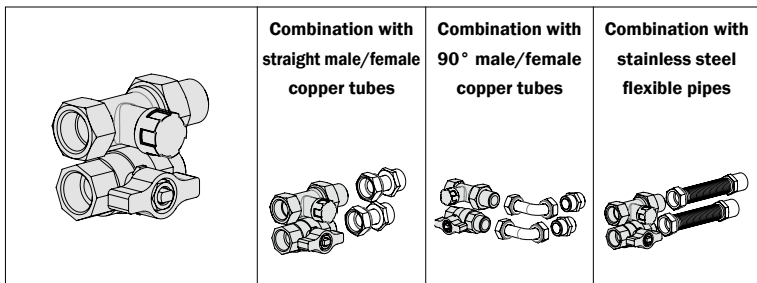
Size	Ø	Code
61-62	1/2"	A0056LT09129
63-64-65	3/4"	A0056LT09349



Description

No. 2 STAINLESS STEEL FLEXIBLE PIPES

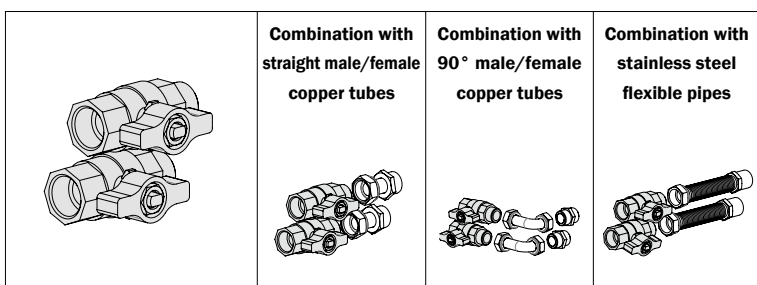
Size	Ø	Code
61-62	1/2"	A0055620043
63-64-65	3/4"	A0055620044



Description

No. 1 SHUT OFF/No. 1 BALANCING VALVE

Size	Ø	Code
61-62	1/2"	A0056CH0512
63-64-65	3/4"	A0056CH0534



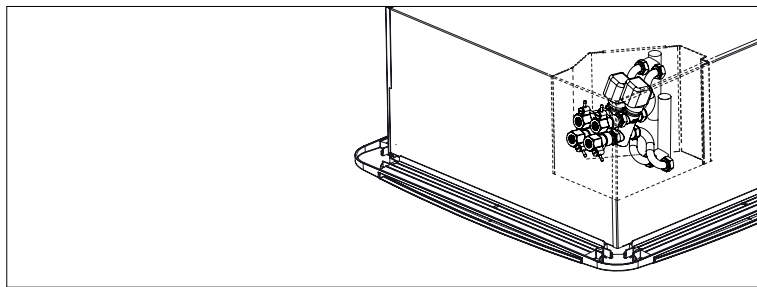
Description

No. 2 SHUT OFF VALVES

Size	Ø	Code
61-62	1/2"	A0056CH0612
63-64-65	3/4"	A0056CH0634

VALVES

3 WAY VALVES INSTALLED (4 PIPES SYSTEM)



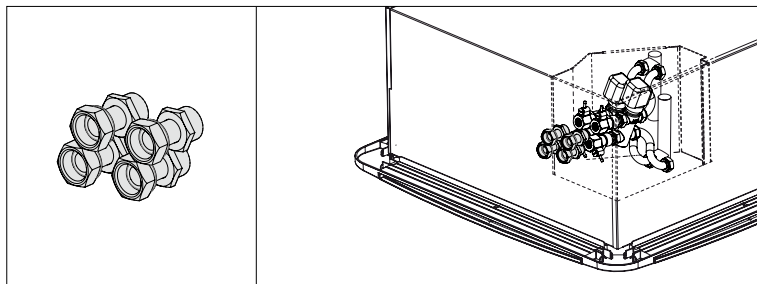
Valves integrated inside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

3 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT03CA

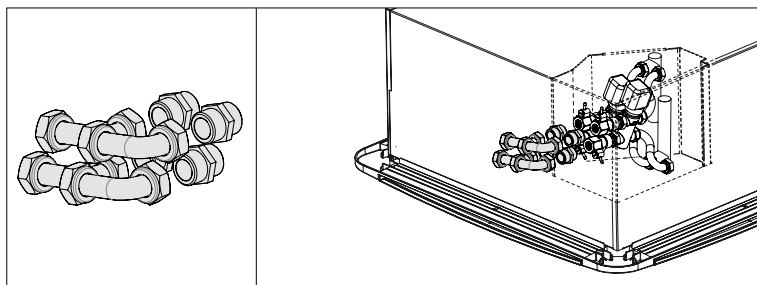
ACCESSORIES (LOOSE)



Description

No. 4 STRAIGHT MALE/FEMALE COPPER TUBE

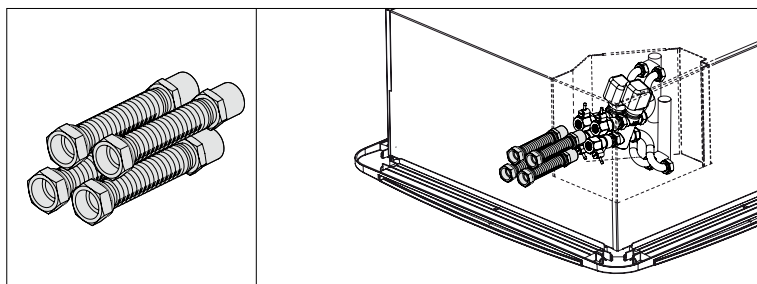
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT09CA



Description

No. 4 90° MALE/FEMALE COPPER TUBES

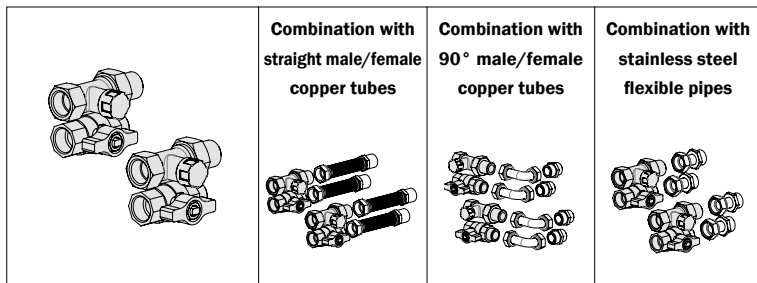
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT09CA9



Description

No. 4 STAINLESS STEEL FLEXIBLE PIPES

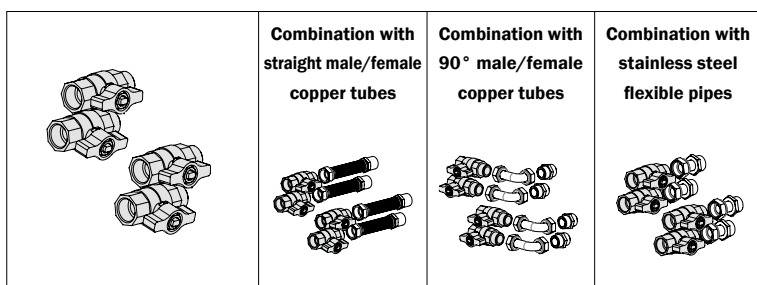
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A005620045



Description

No. 2 SHUT OFF/No. 2 BALANCING VALVES

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH05CA



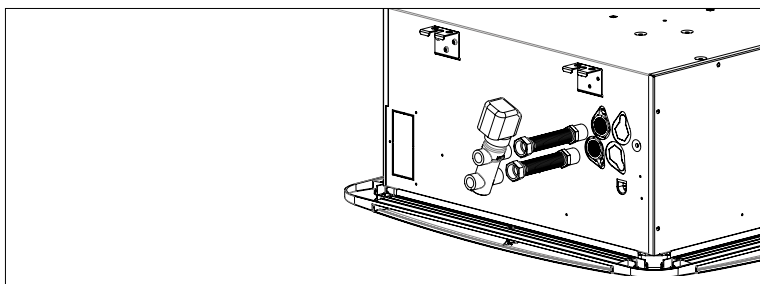
Description

No. 4 SHUT OFF VALVES

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH06CA

VALVES

3 WAY VALVES INSTALLED NOT INSTALLED (2 PIPE SYSTEM)



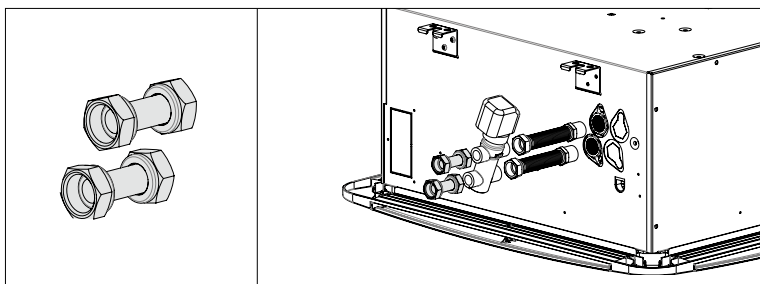
Valves integrated outside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

3 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
61-62	1/2"	A0056LT0313
63-64-65	3/4"	A0056LT0335

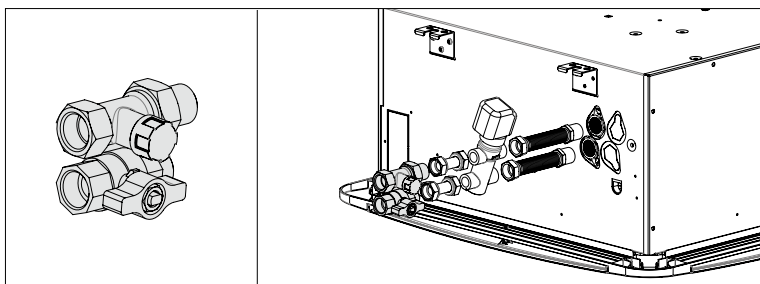
ACCESSORIES (LOOSE)



Description

No. 2 STRAIGHT COPPER TUBES FOR 3-WAY VALVE

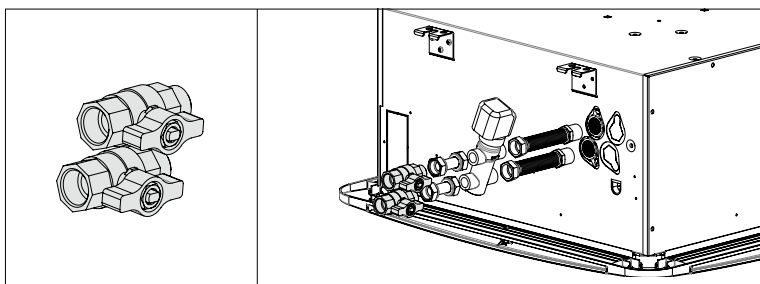
Size	Ø	Code
61-62	1/2"	A0056LT3912
63-64-65	3/4"	A0056LT3934



Description

No. 1 SHUT OFF/No. 1 BALANCING VALVE

Size	Ø	Code
61-62	1/2"	A0056CH0512
63-64-65	3/4"	A0056CH0534



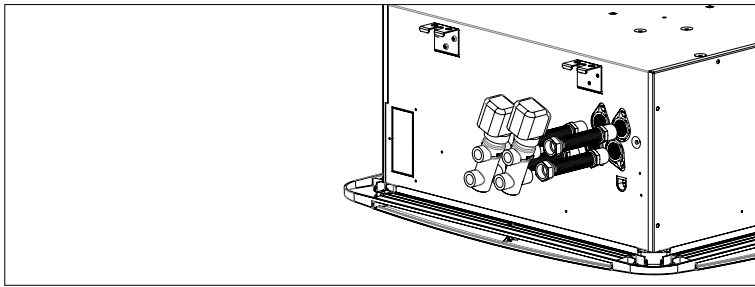
Description

No. 2 SHUT OFF VALVES

Size	Ø	Code
61-62	1/2"	A0056CH0612
63-64-65	3/4"	A0056CH0634

VALVES

3 WAY VALVES INSTALLED NOT INSTALLED (4 PIPE SYSTEM)



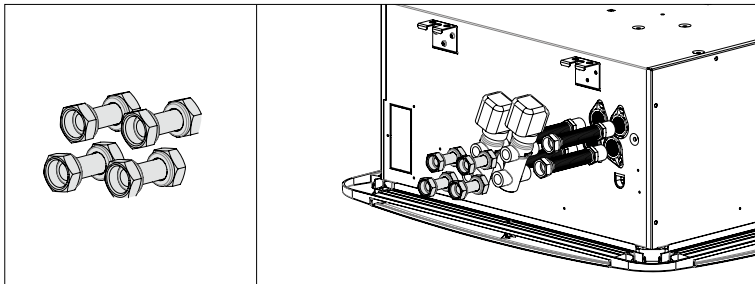
Valves integrated outside the unit. The auxiliary condensate drain pan is supplied as standard.

Description

3 WAY VALVE (ON/OFF 230 VAC)

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT03CB

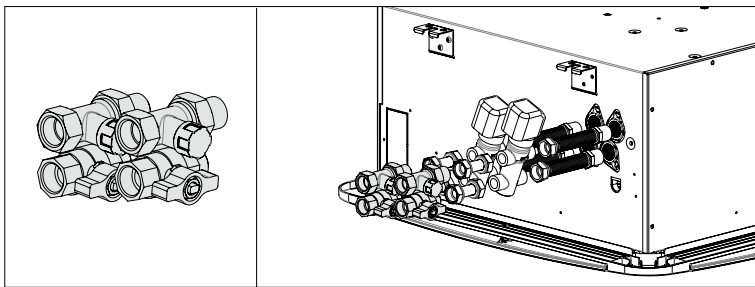
ACCESSORIES (LOOSE)



Description

No. 4 STRAIGHT COPPER TUBES FOR 3-WAY VALVE

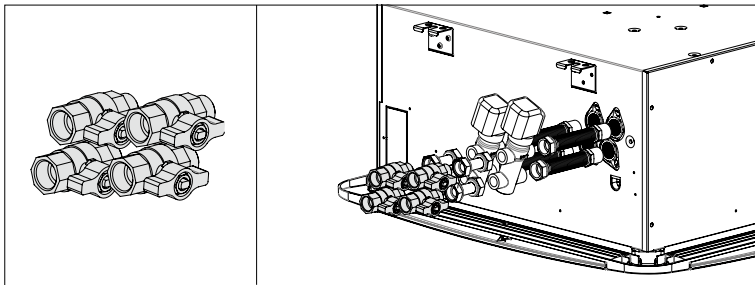
Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056LT39CA



Description

No. 2 SHUT OFF/No. 2 BALANCING VALVES

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH05CA



Description

No. 4 SHUT OFF VALVES

Size	Ø	Code
81-82-83-83C-84-84C	1/2"	A0056CH06CA

VALVES

SHUT OFF/BALANCING VALVE

TECHNICAL DATA *	
SHUT OFF VALVE	
Maximum pressure	10 bar
Fluid min temperature	4 °C
Fluid max temperature	100 °C
Liquids allowed	water with glycol < 50%

TECHNICAL DATA *	
BALANCING VALVE	
Maximum pressure	10 bar
Fluid min temperature	4 °C
Fluid max temperature	100 °C
Liquids allowed	water with glycol < 50%

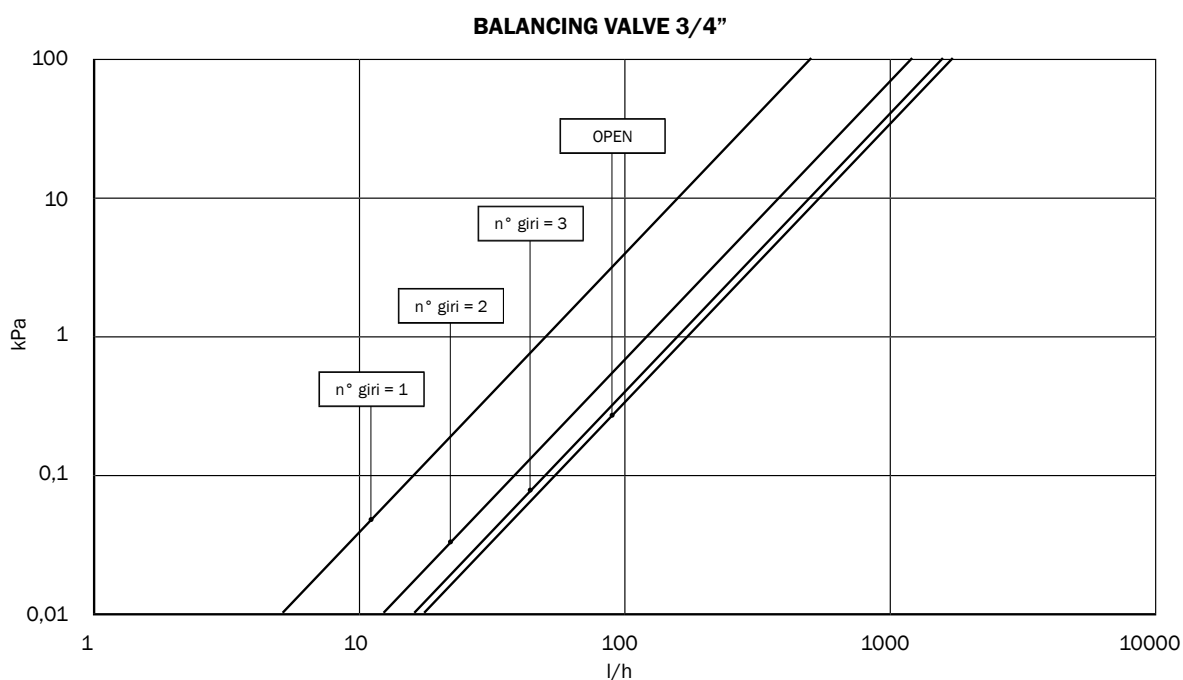
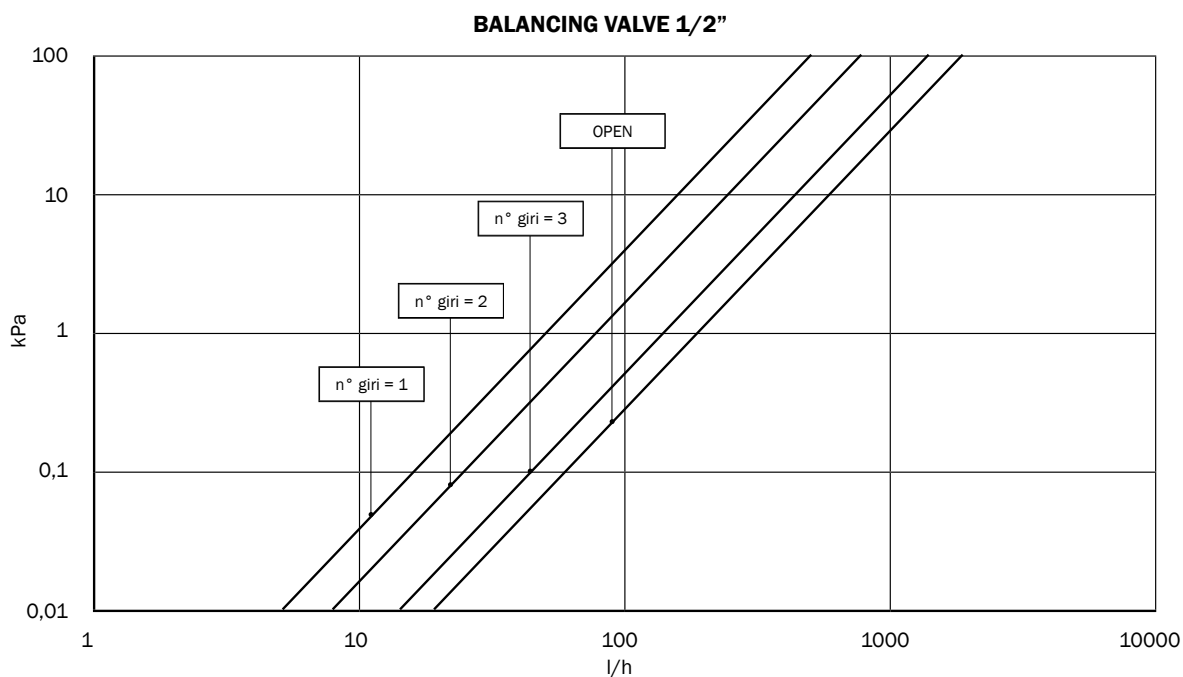
* Technical data refer only to the valve kit.

Technical data of the unit in section TECHNICAL DATA > WORKING LIMITS

* Technical data refer only to the valve kit.

Technical data of the unit in section TECHNICAL DATA > WORKING LIMITS

WATER PRESSURE DROP



VALVES

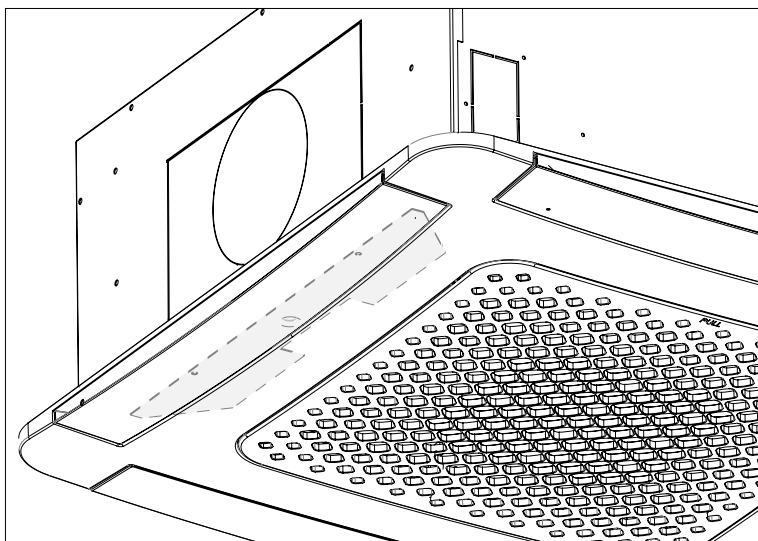
ACTUATORS

Technical characteristics

Action		ON/OFF
Power supply	50 \pm 60 Hz 24V - 230 VAC/DC (+10%/-15%)	
Steady state power consumption		2,5 W
Initial opening time (NC) or closing time (NA) (power ON)	230V	90 s
Final opening time (NC) or closing time (NA) (power ON)		3 min
Initial opening time (NC) or closing time (NA) (power ON)	24V	3 min
Final opening time (NC) or closing time (NA) (power ON)		5 min
Actuator stroke		max 3.5 mm
Valve stroke		2.5 mm
Protection level		IP44
Limit room temperature		0 a 50 °C
Limit storage temperature		-25 a 60 °C no condensation
Valve fluid max temperature		Max 110 °C
Nominal thrust (power OFF) (NC)		140 N (\pm 10%)
Nominal thrust (power OFF) (NA)		80 N (\pm 10%)
Action		Proportional (0...10 V)
Power supply		50/60 Hz 24Vac \pm 15%
Steady state power consumption		2W
Stroke time		15 sec/mm
Maximum stroke		4 mm
Protection level		IP 40
Limit room temperature		0 a 50 °C
Limit storage temperature		-25 a 65 °C no condensation
Valve fluid max temperature		95 °C
Nominal thrust		120 N (+30%)

ACCESSORIES

ACCESSORIES NOT INSTALLED



Description

VENT PLATE

Size

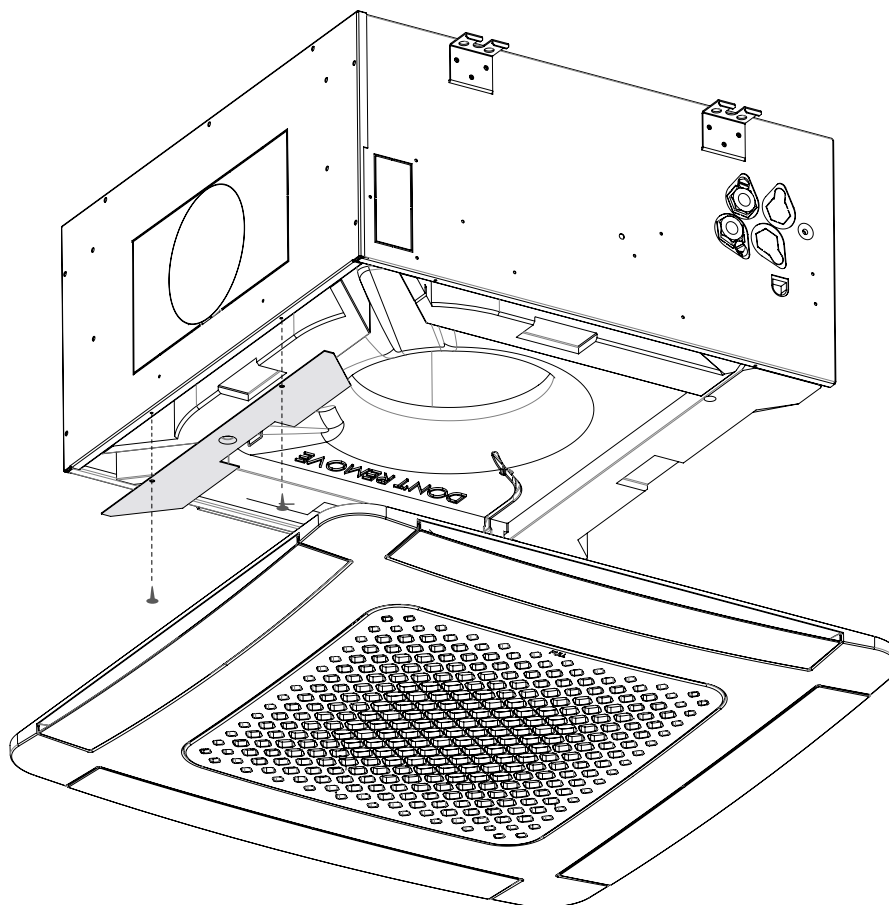
Code

LIGHT

A0055520300

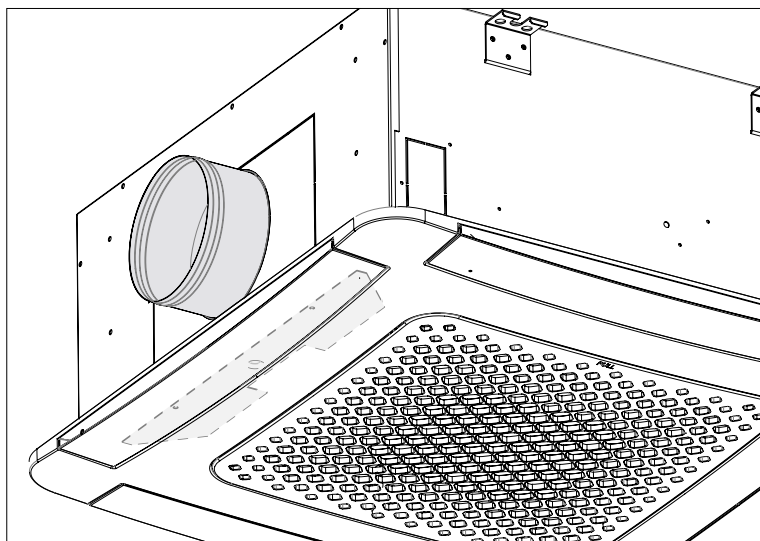
It is recommended to use the vent plate in case of need to install the unit near walls. In this way the deflector near the wall will be closed. The accessory is supplied loose and must be installed on site afterwards.

FIXING OF VENT PLATE



ACCESSORIES

ACCESSORIES NOT INSTALLED



Description

CIRCULAR SPIGOT Ø 150 mm FOR AIR SUPPLY TO ADJACENT ROOM (with flap lower)

Size

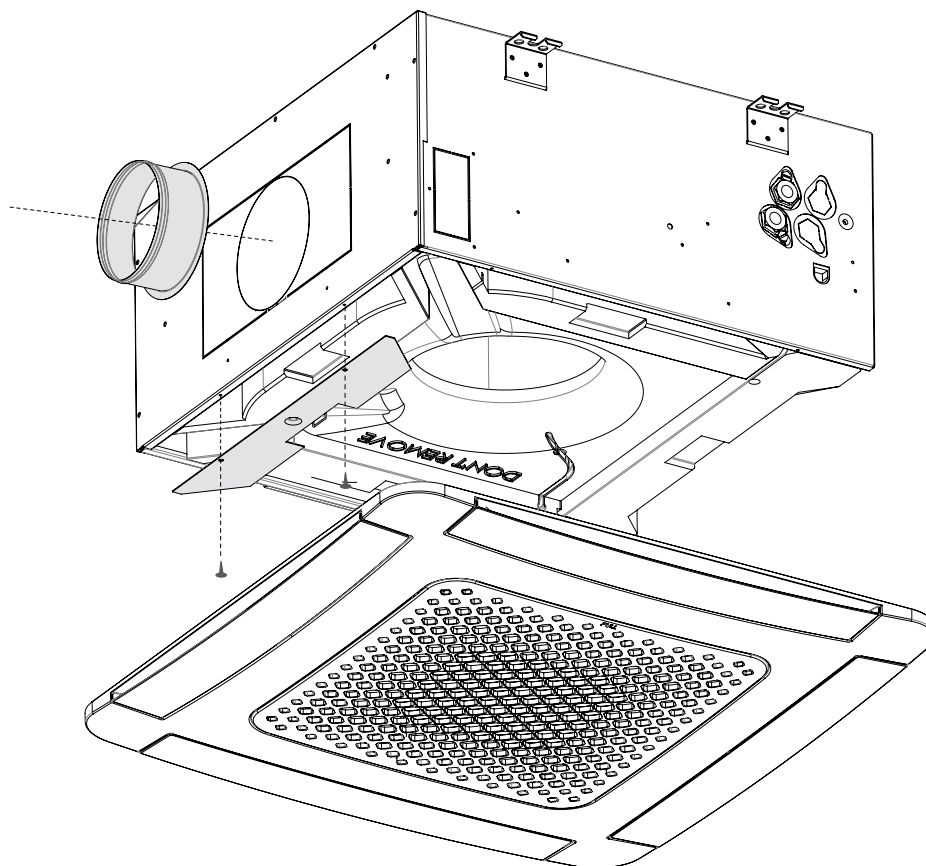
LIGHT

Code

A0055500508

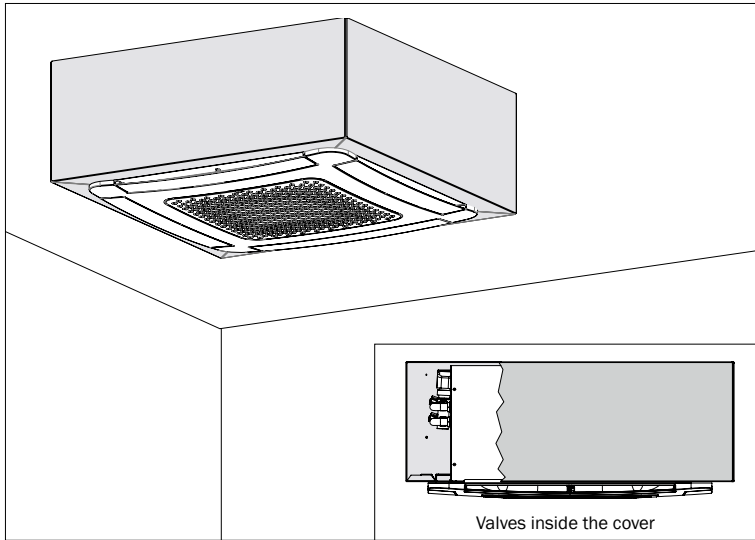
It is recommended in case of need to convey air to the adjacent room or introduce it through a diffusion grille positioned at a safe distance from the unit. To allow this just resort to the closure of the vent plate and opens a passageway on the structure of the unit which, through a nozzle of diameter of 150 mm, conveys the air towards the adjacent room.

FIXING OF CIRCULAR SPIGOT Ø 150 mm FOR AIR SUPPLY TO ADJACENT ROOM (with flap lower)



ACCESSORIES

ACCESSORIES NOT INSTALLED



Description

PRE-PAINTED STEEL COVER

Size	Code
LIGHT	A0055510543

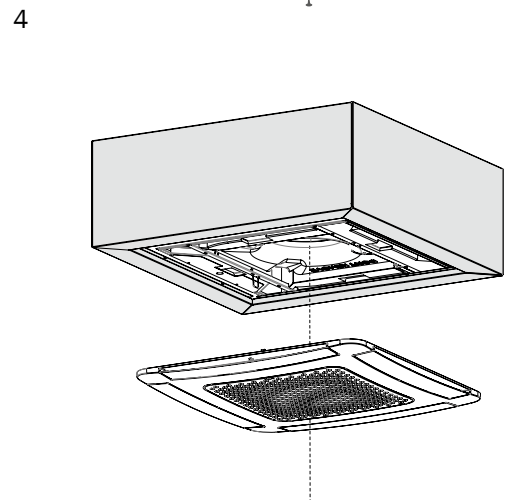
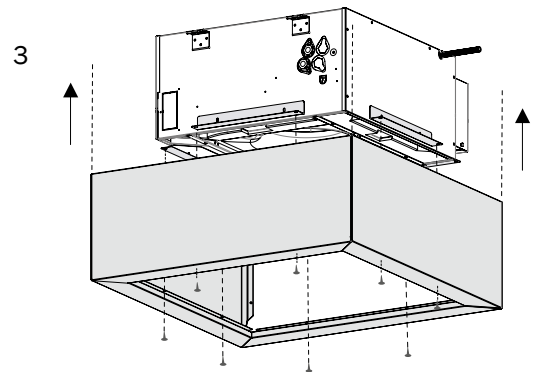
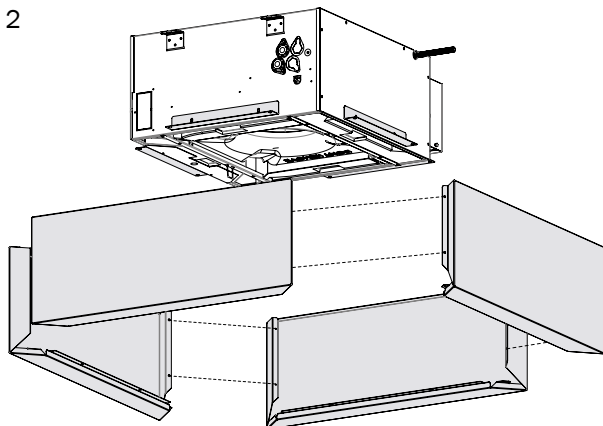
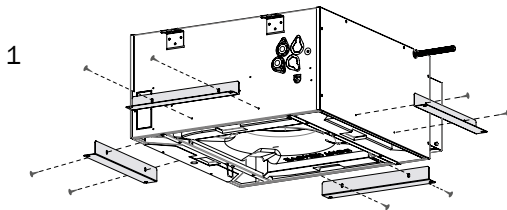
Options	Code
Steel cover painting	A0061000048

It allows to reduce the visual impact of the unit when the installation is in the false ceiling (visible installations).

It is supplied loose, to be assembled on site.

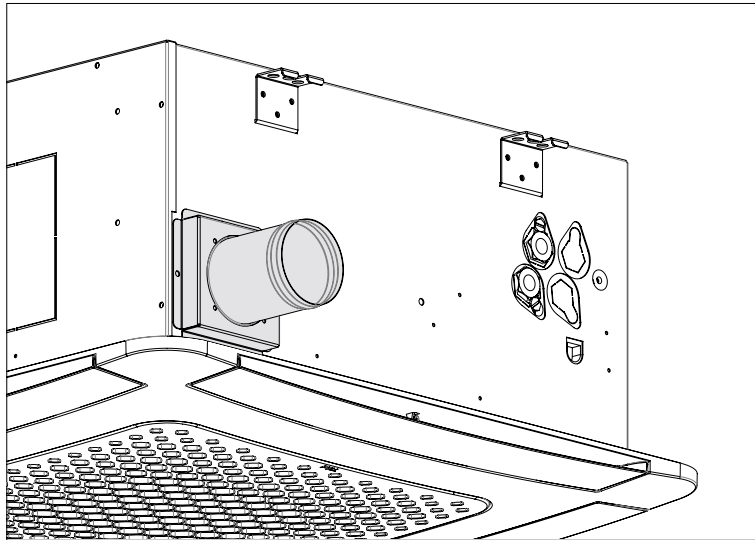
It is made of panels of white RAL9010 colour and can be painted on request with different RAL colours.

FIXING OF PRE-PAINTED STEEL COVER



ACCESSORIES

ACCESSORIES NOT INSTALLED



Description

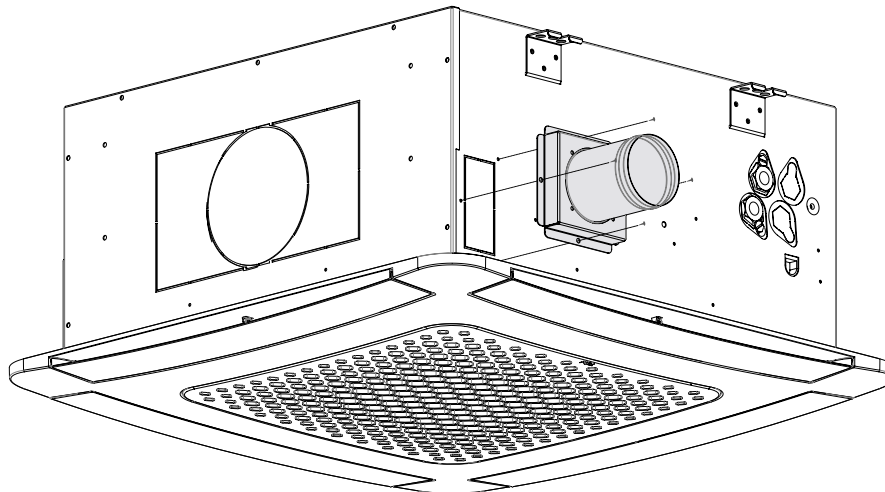
Ø 80 mm CIRCULAR SPIGOT FOR FRESH AIR INTAKE (only spigot)

Size	Code
LIGHT	A0055500166

It is installed in case of need to introduce the primary air in the environment. In this case the airflow of input, coming from a pipe, it is sucked by the fan and passed through the heat exchanger before being introduced into the environment in the due thermo-hygrometric conditions via the four-way panel.

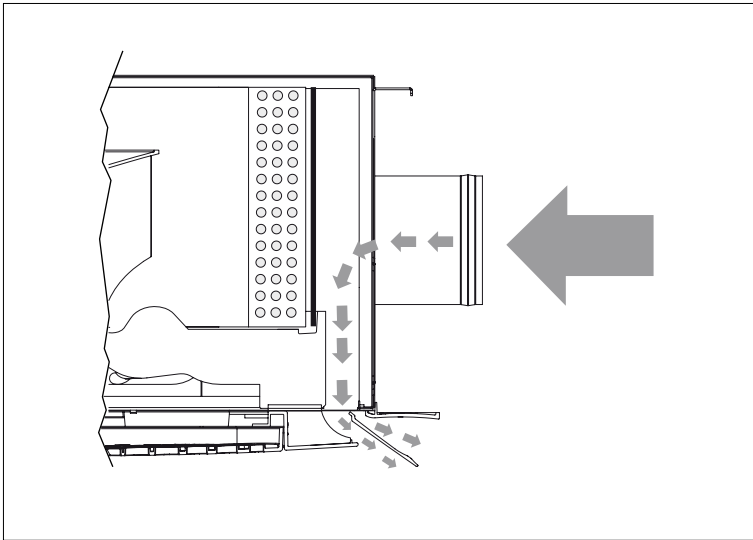
Provided with a nozzle of a nominal diameter of 80 mm with a special flange of anchoring/fixing to the unit.

FIXING OF Ø 80 mm CIRCULAR SPIGOT FOR FRESH AIR INTAKE (only spigot)



ACCESSORIES

ACCESSORIES NOT INSTALLED



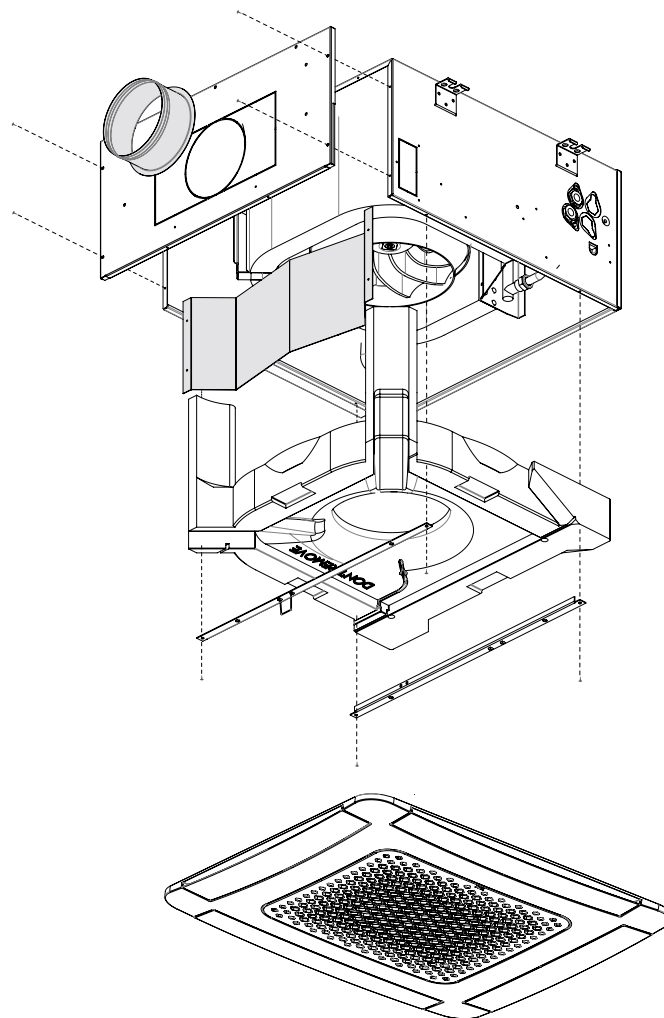
Description

FRESH AIR BAFFLE PLATE
(with \varnothing 150 mm spigot) *

Size	Code
LIGHT	A0055520301

It is used in case to introduce directly the primary air in the environment without any process of heating or cooling with its dehumidification.
The air drawn from the outside must be properly filtered before being introduced in the unit.

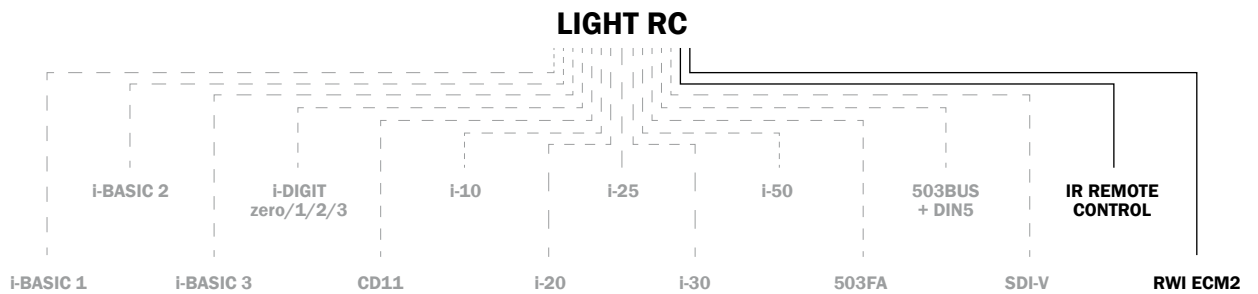
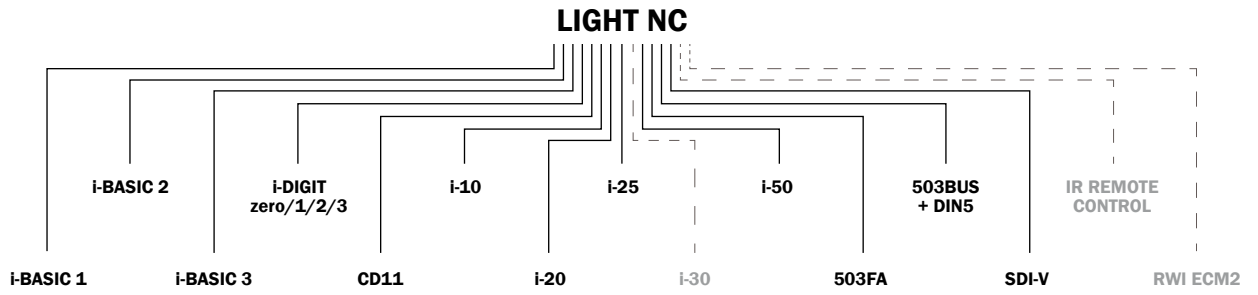
* Not available for versions with electric heater (NC-E/RC-E)

FIXING OF FRESH AIR BAFFLE PLATE (with \varnothing 150 mm spigot) *

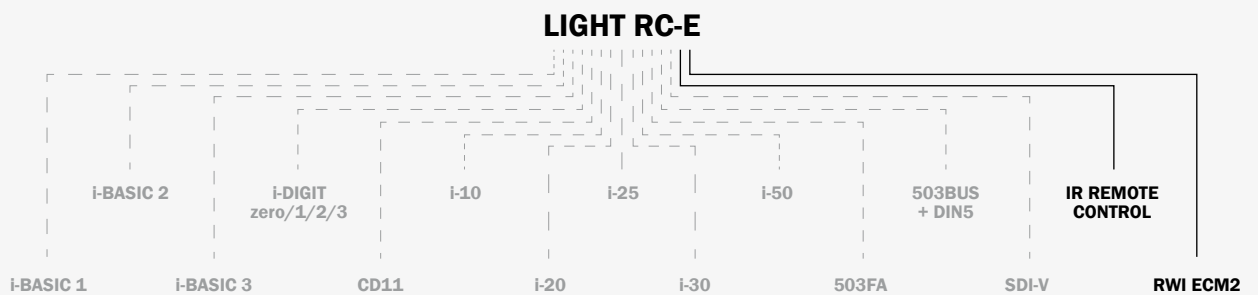
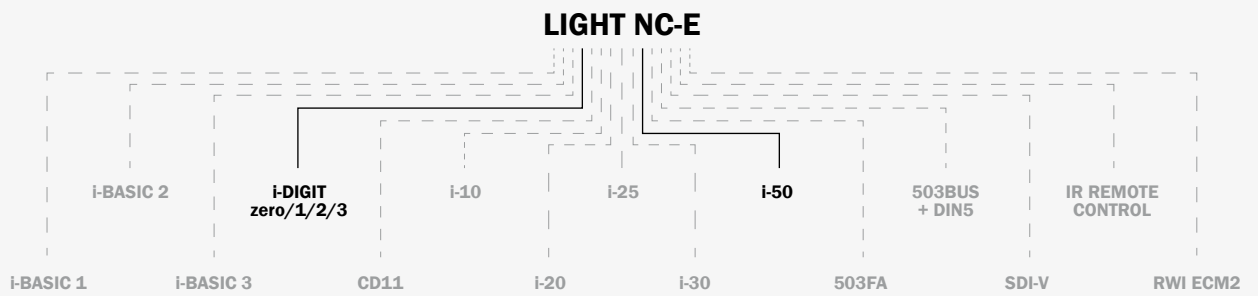
REGULATION

SYNOPTIC

ASYNCHRONOUS MOTOR



INTEGRATED ELECTRIC HEATER



REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT NC

i-DIGIT zero



Description

Programmable electronic thermostat for water cassette 2 or 4 pipes with LCD display

Model	Code
LIGHT NC	A0055150280
LIGHT NC-E	

Main functions

- temperature and set point display on backlit LCD;
- real time clock.

Programmable functions for 2 and 4 pipes system:

- temperature control;
- automatic fan speed control;
- modulating fan control;
- modulating (0-10Vdc) or on-off valves control;
- electric heating control;
- economy function;
- window contact;
- remote sensors inputs;
- antifreeze function;
- filter dust control;
- supervising functions using Modbus protocol.

i-DIGIT 1



Description

Programmable electronic thermostat for water cassette 2 or 4 pipes with LCD display

Model	Code
LIGHT NC	A0055150281
LIGHT NC-E	

Main functions

- temperature and set point display on backlit LCD;
- real time clock.

Programmable functions for 2 and 4 pipes system:

- temperature control;
- automatic fan speed control;
- modulating fan control;
- modulating (0-10Vdc) or on-off valves control;
- electric heating control;
- economy function;
- window contact;
- remote sensors inputs;
- antifreeze function;
- filter dust control;
- supervising functions using Modbus protocol;
- humidity control.

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT NC

i-DIGIT 2



Description	
Programmable electronic thermostat for water cassette 2 or 4 pipes with LCD display	
Model	Code
LIGHT NC	A0055150282
LIGHT NC-E	

Main functions

- temperature and set point display on backlit LCD;
- real time clock.

Programmable functions for 2 and 4 pipes system:

- temperature control;
- automatic fan speed control;
- modulating fan control;
- modulating (0-10Vdc) or on-off valves control;
- electric heating control;
- economy function;
- window contact;
- remote sensors inputs;
- antifreeze function;
- filter dust control;
- supervising functions using Modbus protocol;
- fan alarm control (output free contact);
- auxiliary input (configurable on request).

i-DIGIT 3



Description	
Programmable electronic thermostat for water cassette 2 or 4 pipes with LCD display	
Model	Code
LIGHT NC	A0055150283
LIGHT NC-E	

Main functions

- temperature and set point display on backlit LCD;
- real time clock.

Programmable functions for 2 and 4 pipes system:

- temperature control;
- automatic fan speed control;
- modulating fan control;
- modulating (0-10Vdc) or on-off valves control;
- electric heating control;
- economy function;
- window contact;
- remote sensors inputs;
- antifreeze function;
- filter dust control;
- supervising functions using Modbus protocol.
- humidity control;
- fan alarm control (output free contact);
- auxiliary input (configurable on request).

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT NC

i-BASIC 1



Description

Analog electronic thermostat for water cassette 2 or 4 pipes

Model

Code

LIGHT NC

A0055150271

Main functions

- switching the water cassette on and off;
- room temperature adjustment;
- manual heating/cooling selection;
- manual 3 speed setting;
- on/off valves control.

i-BASIC 2



Description

Microprocessor electronic thermostat for water cassette 2 or 4 pipes

Model

Code

LIGHT NC

A0055150272

Main functions

- switching the water cassette on and off;
- room temperature adjustment;
- manual heating/cooling selection or automatic (by supply water sensor);
- programmability through jumper of the functions: destratification, fan mode, system type (2/4 pipes), electric heater function mode, neutral zone value;
- on/off valves control or no. 1 floating valve.

i-BASIC 3



Description

Electronic thermostat for water cassette

Model

Code

LIGHT NC

A0055150273

Main functions

- room temperature adjustment;
- manual or automatic heating/cooling selection;
- manual and automatic 3 speed setting;
- programmability through jumper of the functions: destratification, fan mode, system type (2/4 pipes), electric heater function mode, neutral zone value, modulating motor control.
- on/off valves control or no. 1 floating valve;
- modulating valves control (0-10Vdc).

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT NC

CD11



Description

Control for water cassette without temperature control

Model

Code

LIGHT NC

A0055150100

Main functions

- switching the water cassette on and off;
- manual heating/cooling selection;
- manual 3 speed setting.

i-10



Description

Electronic thermostat for water cassette 2 or 4 pipes

Model

Code

LIGHT NC

A0055150324

Main functions

- switching the water cassette on and off;
- room temperature adjustment;
- manual heating/cooling selection;
- manual 3 speed setting;
- on/off valves control.

i-20



Description

Electronic thermostat for water cassette 2 pipes

Model

Code

LIGHT NC

A0055150340

Main functions

- switching the water cassette on and off;
- room temperature adjustment (internal air sensor);
- heating/cooling selection: central control;
- manual 3 speed setting;
- on/off valve control.

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT NC

i-25



Description

Electronic thermostat for water cassette 4 pipes

Model

Code

LIGHT NC

A0055150354

Main functions

- switching the water cassette on and off;
- room temperature adjustment;
- automatic heating/cooling selection with adjustable neutral zone;
- manual 3 speed setting;
- on/off valves control.

i-50



Description

Programmable electronic thermostat with LCD for water cassette 2 or 4 pipes

Model

Code

LIGHT NC

A0055150364

Main functions

- switching the water cassette on and off;
- room temperature adjustment (internal air sensor);
- manual or automatic heating/cooling selection;
- manual or automatic 3 speed setting;
- display for reading/displaying room and set point temperature;
- control of on/off and heating (3-point) valves, control of electric heater;
- programmability of functions.

503FA



Description

Recessed thermostat on 503 box

Model

Code

LIGHT NC

A0055150131

Main functions

- switching the water cassette on and off;
- room temperature adjustment;
- manual or automatic heating/cooling selection;
- manual or automatic 3 speed setting;
- display for reading/displaying room and set point temperature;
- on/off valves control;

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT NC

503BUS + DIN5 POWER UNIT



Description

Area controller for water cassette, consisting of LCD unit and power unit Din5

Model		Code
LIGHT NC	503BUS	A0055150083
LIGHT NC	DIN5	A0055150440

Main functions

- control from a single point of an area with up to 15 water cassette installed, using an LCD unit in master/slave mode;
- 3 speed motor control;
- on/off valves control.

SDI-V



Description

Interface card to control up to 4 water cassette

Model		Code
LIGHT NC	NOT INSTALLED	A0055150190
LIGHT NC	INSTALLED	A0055150441

- to control up to 4 units from a single thermostat;
- for unit with 3 speed motor and on/off valves.

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT RC

INFRARED REMOTE CONTROL



Description

Electronic card with onboard units and infrared remote control. The control card is provided with a RS485 communication port for the connection to a supervisory system functioning with the Modbus protocol or to allow the master/slave connection of the units. One master and up to 59 slaves.

Each unit comes with 3 temperature sensors (air, cold water, hot water)* in order to fully automate the unit.

* 2 pipe unit = air temp., water plant temp., hot coil temp.

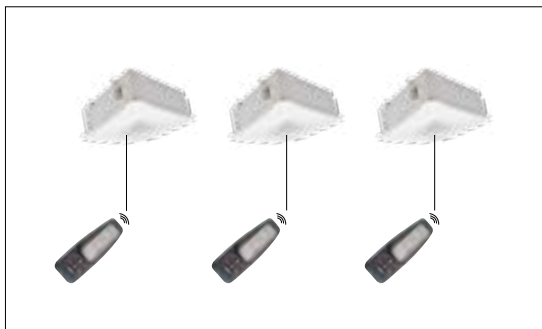
4 pipe unit = air temp., water temp., hot coil temp.

Model	Code
LIGHT RC	A0055150432
LIGHT RC-E	

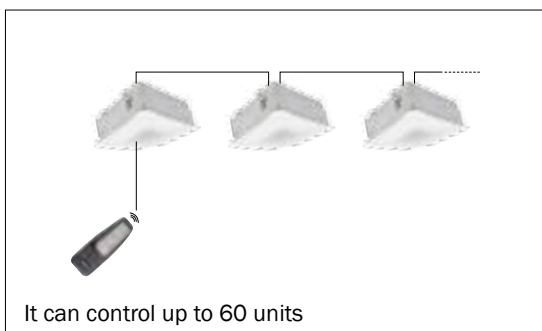
Main functions

- Setting Set point.
- Fan mode (auto -1-2-3).
- Operating mode(auto-heat-cool-fan).
- Timer - 24 hours.
- 2 and 3 way valve control (heating mode).
- 2 and 3 way valve control (cooling mode).
- Automatic control of electrical resistance with heating function or integration to the heating water.
- Control only solenoid valves or solenoid valves and fan motor.
- Automatic control of switching hot-cold both on plants with 4 or 2 pipes, and solenoid valves with 2 or 3-way.
- Control in neutral zone on 4 pipes plants. Optionally also on 2 pipes with electric heating.
- Automatic control start-up fan both warm and cold:
 - Temperature ratings for units in cooling mode = 15 °C
 - Temperature ratings for units in heating mode = 32 °C
- Antifreeze control of the coil (4 °C) and temperature limit (75 °C).
- Anti-stratification cycle in heating.
- Automatic control positioning deflector wings according to the thermal cycle in progress.
- ECM motor supervision with proportional control and acquisition motor alarm
- LED indication of alarm water in tank, ECM motor break, water temperature, probes failed.
- Open window signal.

One control for each unit



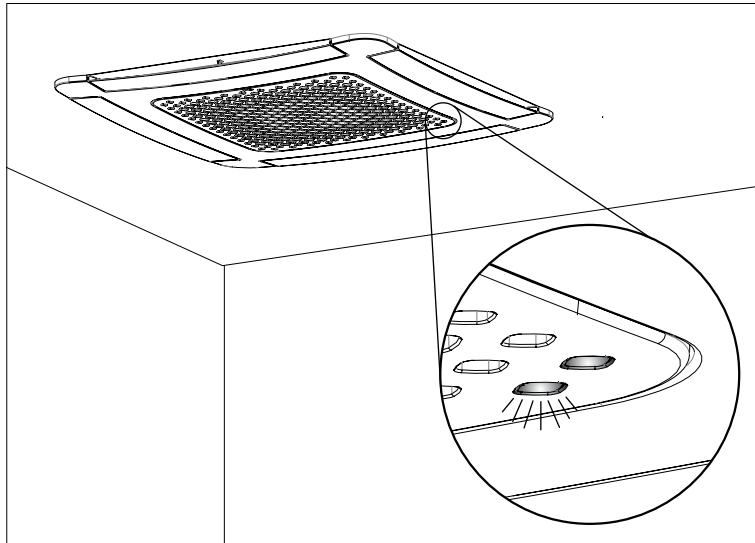
One control for each unit - MASTER/SLAVE



REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT RC

INFRARED REMOTE CONTROL RECEIVER (on versions RC always supplied installed on frontal panel)



Description

The infrared remote control receiver is fully integrated into the intake grille and is provided with a signalling LED to inform the user of the operating mode or possible anomalies (refer to table INDICATIONS LED).

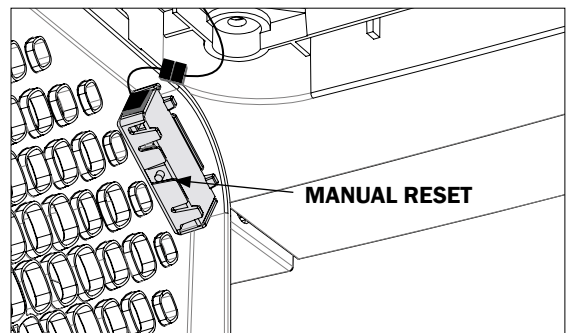
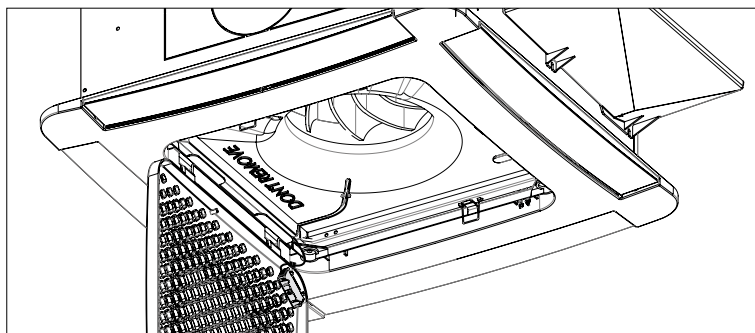
INDICATIONS LED - Normal operation

LED off	Unit OFF or in FAN mode	
Solid blue LED	Cooling mode	
Solid red LED	Heating mode	
Blue flashing LED 1 sec. ON - 1 sec. OFF	Open window contact	Unit OFF
Red/blue flashing LED	Water temperature read in progress	Standby mode

INDICATIONS LED - Alarm condition

Red LED	2 flashes and one pause	ALARM SWITCH input open	Water level alarm in condensation
	3 flashes and one pause	EC FAULT input open	ECM motor alarm
	4 flashes and one pause	T3 = 75 °C T3 = 4 °C	High temperature alarm
	5 flashes and one pause	T1 probe disconnected or short-circuited	Low temperature alarm
	6 flashes and one pause	T2 probe disconnected or short-circuited	
	7 flashes and one pause	T3 probe disconnected or short-circuited	

INFRARED RECEIVER (manual reset)



EMERGENCY BUTTON

If the remote control has low batteries, the cassette can be turned on/off by pressing the emergency button on the receiver, accessible through the opening of the intake grille.

To turn on the unit

Press and hold the button for 3 seconds until you hear the beep. The cassette will turn on in "AUTO MODE". Set Heat (21 °C), Set Cool (24 °C) and fan at medium speed.

To turn off the unit

Press and hold the button for 3 seconds

REGULATION

CONTROLLERS FOR WATER CASSETTE MODEL LIGHT RC

RWI ECM2 (provided in place of the infrared remote control)



Description

Electronic card with on-board terminal user interface wall. The control card is provided with a RS485 communication port for the connection to a supervisory system functioning with the Modbus protocol or to allow the master/slave connection of the units. One master and up to 59 slaves.

Each unit comes with 3 temperature sensors (air, cold water, hot water)* in order to fully automate the unit.

* 2 pipe unit = air temp., water plant temp., hot coil temp.

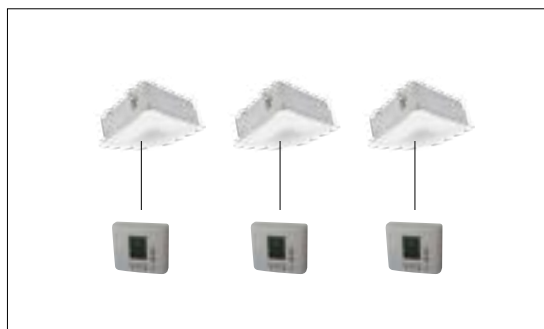
4 pipe unit = air temp., water temp., hot coil temp.

Model	Code
LIGHT RC	A0055150431
LIGHT RC-E	

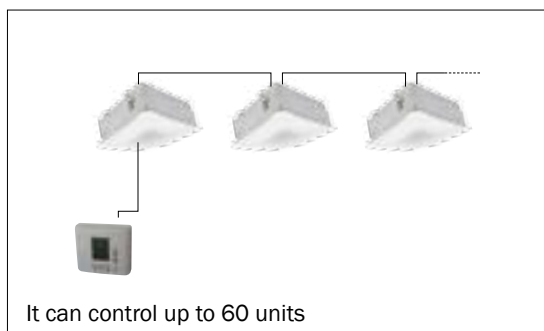
Main functions

- Setting Set point.
- Fan mode (auto -1-2-3).
- Operating mode(auto-heat-cool-fan).
- 2 and 3 way valve control (heating mode).
- 2 and 3 way valve control (cooling mode).
- Automatic control of electrical resistance with heating function or integration to the heating water.
- Control only solenoid valves or solenoid valves and fan motor.
- Automatic control of switching hot-cold both on plants with 4 or 2 pipes, and solenoid valves with 2 or 3-way.
- Control in neutral zone on 4 pipes plants. Optionally also on 2 pipes with electric heating.
- Automatic control start-up fan both warm and cold:
 - Temperature ratings for units in cooling mode = 15 °C
 - Temperature ratings for units in heating mode = 32 °C
- Antifreeze control of the coil (4 °C) and temperature limit (75 °C).
- Anti-stratification cycle in heating.
- Automatic control positioning deflector wings according to the thermal cycle in progress.
- ECM motor supervision with proportional control and acquisition motor alarm.
- LED indication of alarm water in tank, ECM motor break, water temperature, probes failed.
- Open window signal.

One control for each unit

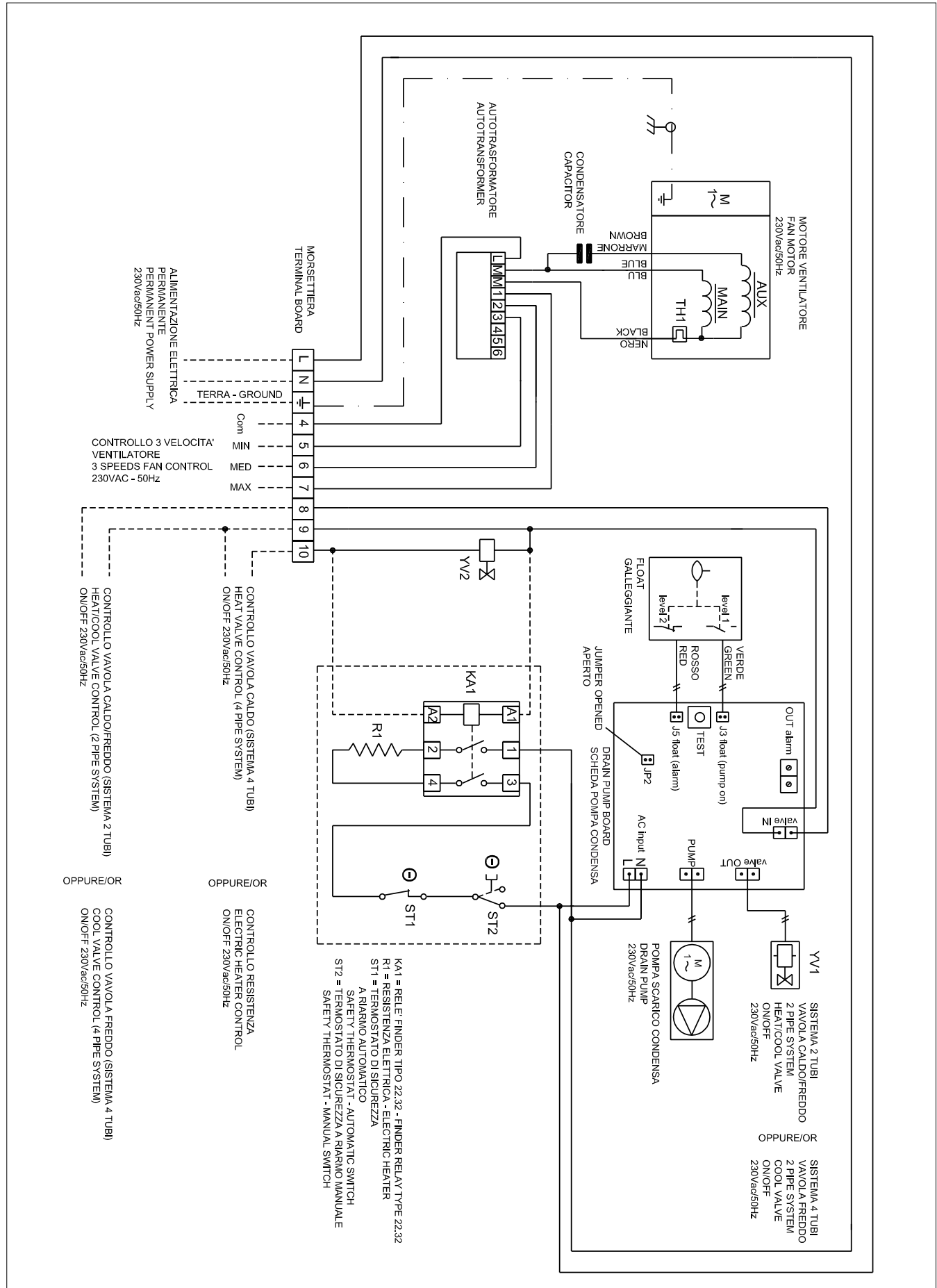


One control for each unit - MASTER/SLAVE



WIRING DIAGRAM FOR WATER CASSETTE MODEL LIGHT NC

WATER CASSETTE FORESEEN FOR WALL MOUNTED CONTROL



With the perspective of improvement, and against the continuous action of research and development, the Manufacturer might modify, even without any prior notice, the given technical data.



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