



# [ Licon OKIOC

## WALL MOUNTED CONVECTORS

with forced convection and optimized convection

Developed for low temperature heating systems, high efficiency guaranteed also at very low temperature gradients, e.g. 35/30 °C. Ideal everywhere, where the heat source is a heat pump, a solar system, a condensation boiler or as a supplementary source of heat for floor heating, particularly during a transitional period or when an instant temperature increase in the room is required. At the same time suitable for rooms' dry-cooling during the summer months. All of this with the benefits of the Optimized Convection system – low noise and low fan intake while maintaining maximally attainable performances.

Univeral use – heating and dry-cooling!

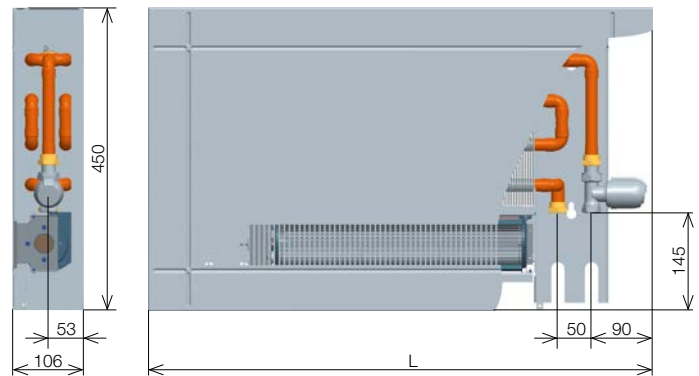


# Wall mounted convectors with forced convection

## Licon OKIOC 45/11



- used for heating or dry-cooling
- high efficiency even at low temperatures of the heating system
- patented design solutions
- high-performance, low energy and quiet fans
- the same regulation as the one for floor convectors PKOC and free standing convector with forced convection OLOC
- two pipe system
- right bottom connection
- possibility of control through BMS (Building Management System)
- the convector is intended for dry environment



The dimensions are given in mm.

### Specification

height (mm)	450
depth (mm)	106
length (L mm)	750, 1 000, 1 250, 1 500, 1 750, 2 000
exchanger height (mm)	240
exchanger width (mm)	100
fans' impeller diameter (mm)	60
connection to the heating system	inner G 1/2"
connection method	recommended bottom connection, right

Version OKIOC • coated in RAL 9010 zinc galvanised steel



### Technical parameters

Height	cm	45																									
Depth	cm	11																									
Lengths	cm	75				100				125				150				175				200					
Noisiness - acoustic pressure 1m	dB(A)	0	23.1	31.3	38	0	23.4	31.7	38.5	0	23.7	32.1	39	0	24	32.5	39.5	0	24.4	33	40.1	0	24.7	33.4	40.6		
Max. intake/voltage DC	W/V	5.5/12-24				8/12-24				9.5/12-24				14/12-24				16/12-24				18.5/12-24					
Rpm		Off	1	2	3	Off	1	2	3	Off	1	2	3	Off	1	2	3	Off	1	2	3	Off	1	2	3		
Cooling output	t1 °C hum. %	Cooling output [W]																									
		28	50	0	149	207	263	0	291	407	527	0	387	542	703	0	434	604	791	0	523	732	966	0	618	864	1141
		26	50	0	123	171	218	0	240	337	435	0	320	448	581	0	359	499	653	0	432	605	798	0	510	714	943
24	50	0	93	128	163	0	180	252	327	0	241	336	435	0	270	375	490	0	323	454	598	0	383	536	708		
Heat output	t1 °C	Heat output [W] / EN 442																									
		18	281	858	1139	1444	563	1716	2279	2888	751	2288	3039	3850	844	2574	3418	4332	1032	3146	4178	5294	1220	3718	4938	6257	
		20	<b>270</b>	<b>823</b>	<b>1093</b>	<b>1385</b>	<b>540</b>	<b>1646</b>	<b>2186</b>	<b>2770</b>	<b>720</b>	<b>2195</b>	<b>2915</b>	<b>3693</b>	<b>810</b>	<b>2469</b>	<b>3279</b>	<b>4155</b>	<b>990</b>	<b>3018</b>	<b>4008</b>	<b>5078</b>	<b>1170</b>	<b>3566</b>	<b>4736</b>	<b>6002</b>	
22	259	788	1047	1326	517	1576	2093	2652	689	2102	2791	3537	776	2364	3140	3979	948	2890	3838	4863	1120	3415	4535	5747			
70/55 °C	18	239	727	966	1224	477	1454	1932	2448	636	1939	2575	3263	716	2182	2897	3671	875	2666	3541	4487	1034	3151	4185	5303		
	20	227	693	920	1165	454	1385	1839	2331	606	1847	2453	3108	682	2078	2759	3496	833	2539	3372	4273	985	3001	3986	5050		
	22	216	658	874	1107	432	1316	1748	2215	576	1755	2330	2953	648	1974	2622	3322	791	2413	3204	4060	935	2851	3787	4798		
55/45 °C	18	168	512	680	862	336	1025	1361	1724	448	1366	1814	2299	504	1537	2041	2587	616	1879	2495	3161	728	2220	2949	3736		
	20	157	478	635	805	314	957	1271	1610	419	1276	1694	2147	471	1435	1906	2415	575	1754	2330	2952	680	2073	2753	3489		
	22	146	445	590	748	292	889	1181	1496	389	1186	1575	1995	438	1334	1771	2245	535	1630	2165	2743	632	1927	2559	3242		
50/40 °C	18	140	428	568	720	281	856	1136	1440	374	1141	1515	1920	421	1283	1704	2160	515	1568	2083	2640	608	1854	2462	3119		
	20	129	394	524	663	259	788	1047	1327	345	1051	1396	1769	388	1183	1571	1990	474	1445	1920	2432	560	1708	2269	2875		
	22	118	361	479	607	237	722	958	1214	316	962	1278	1619	355	1082	1437	1821	434	1323	1757	2226	513	1563	2076	2631		

- temperature exponent  $m = 1.062$

**Cooling is possible only in the non-condensation zone, i.e. above the temperature of the dew-point. The element is not provided with condensate drain. Listed cooling outputs SENSITIV.**

Cooling outputs for other operating conditions on request.

\* SENSITIV - cooling power actually delivered for cooling the air.

Correction factor page 64 • Assembly page 65 • Regulation page 66

## Correction factor $k_t$ for a variant temperature difference $\Delta t$ (K)

### OKIOC 45/11

$\Delta t$ (K)	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
$k_t$	0.338	0.358	0.378	0.398	0.418	0.438	0.459	0.479	0.499	0.520	0.540	0.561	0.581	0.602	0.623	0.643
$\Delta t$ (K)	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49
$k_t$	0.664	0.685	0.705	0.726	0.747	0.768	0.789	0.810	0.831	0.852	0.873	0.894	0.915	0.936	0.958	0.979
$\Delta t$ (K)	50	51	52	53	54	55	56	57	58	59	60					
$k_t$	1.000	1.021	1.043	1.064	1.085	1.107	1.128	1.149	1.171	1.192	1.214					

- temperature exponent  $m = 1.062$

## Weights and water volumes of the wall mounted radiator OKIOC

Type	45/11
kg/linear meter	18.2
l/1 linear meter	1.4

The listed weights are without a packaging.

## The contents of supplies and selectable specifications

### Standard delivery contains

- sheathing of zinc galvanised steel sheet coated in shade RAL 9010 – white
- Al/Cu heat exchanger with low water content, air vent and uniquely shaped lamellas for a higher heat output
- group of low-energy fans
- connecting terminal (F Box)
- wall-mounting brackets
- mounting and maintenance instructions
- the set is packed in a cardboard packaging

### Optional accessories

- in case of ordering more than 5 units it is possible to select another sheathing colour shade (the manufacturer must be consulted in connection with the change)
- shut off valve, thermostatic valve and thermoelectric drive

### Note:

- Standard supply does not include the regulation. The regulation must be ordered separately in accordance with the technical parameters.
- Electrical regulation and regulation elements see page 66
- Regulation is identical for all OC convectors



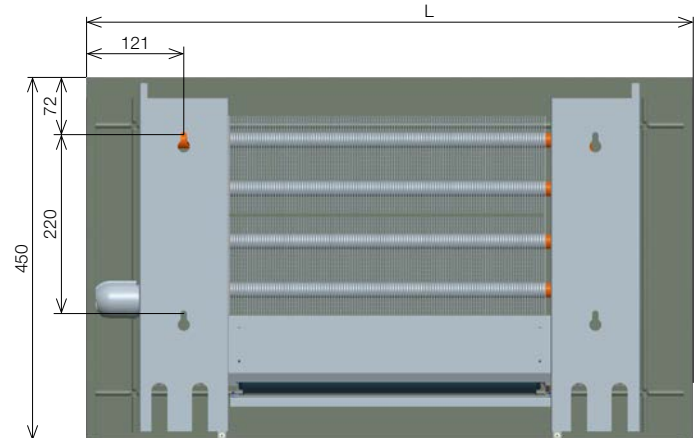
# Convectors installation – construction recommendations

## Licon OKIOC



- It is recommended to position the wall mounted heating element on a peripheral wall, 10 cm above the floor.
- The hot water supply always in the upper pipes; recommend to fit with the stop valve and the thermostatic valve (consultation with the designer is required in case of cooling).
- We recommend to fit the fans once all building work is completed. The exchanger and the sheathing must be well protected against fouling and regular maintenance carried out – including cleaning of exchangers and fans.
- The convector is fitted to the wall using brackets. Then the heat exchanger is inserted and connected to the heating system. We recommend to check the correct position of the exchanger and the fittings in relation to the sheathing. Fit the fans and the sheathing only after all building work has been completed.

### Anchoring diagram



### Assembly electrical part

- Regulation is identical with the one for floor convectors and free standing convector with forced convection
- We recommend to fit OKIOC with the thermoelectric drive
- Do not forget to provide power supply near the installation – more details in the electrical assembly part on page 66 or in the installation instructions

### Design solution of the front face of OKIOC

The wall mounted heating elements OKIOC have on their front face a significant design element, which consists of one design section in the lengths of 75, 100 and 125 cm, two sections in the lengths of 150 and 175 cm and three sections in the length of 200 cm.

*Note: Easily removable cover for better access to the heat exchanger (for instance for easier cleaning).*

# Ordering codes

## Convectors OKIOC

Exclusive	white steel/unpainted exchanger	OKIOC	-	...	/	...	/	..	-	1	00	1	-	R1
		length			height			depth			Cover grid finish			
											00 Embossed grid			
* custom-made design		Wall mounted convectors with forced convection Licon OKIOC (heating and dry-cooling)								Sheathing material 1 steel, white coat RAL 9010 9 other finish/colour RAL of the sheathing*	Exchanger finishes 1 recuperative, unpainted			Elements of electrical regulation in a converter R1 standard