

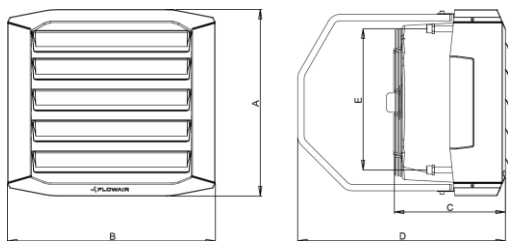
CATALOGUE CARD

LEO FB 10 | LEO FB 20 | LEO FB 30 | LEO FB 25 | LEO FB 45 | LEO FB 65 | LEO FB 100

KK LEO FB V 102030254565100.17.09 EN

MAIN DIMENSIONS

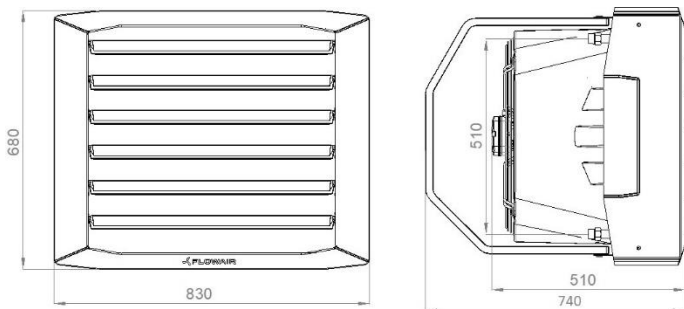
LEO FB 10 | LEO FB 20 | LEO FB 30 | LEO FB 25 | LEO FB 45 | LEO FB 65



Dimension [mm]

	A	B	C	D	E
LEO FB 10, 20, 30	480	550	330	560	355
LEO FB 25, 45, 65	580	650	350	650	440

LEO FB 100



GENERAL INFORMATION

Leo FB fan heaters are dedicated for general use. Construction: casing made of EPP (expanded polypropylene).

Light weight. Rotary mounting console (optional accessory) enables wall and ceiling installation at different angles (90, 45, 65 degrees). LEO FB with console makes it easy to blow air directly onto an area meant to be heated.

LEO FB main purposes is heating buildings with neutral environment like: workshops, car showrooms, warehouses, pavilions, sports halls, exhibitions halls, assembly halls, supermarkets, churches etc.

LEO FB V





Fan heater with AC fan, with possibility of 3-step air flow regulation.

TECHNICAL DATA

	LEO FB 10 V	LEO FB 20 V	LEO FB 30 V	
Maximum airflow	2100 m ³ /h	2000 m ³ /h	1900 m ³ /h	
Power supply	230 V / 50 Hz			
Power consumption	110 W	110 W	110 W	
Current consumption	0,50 A	0,50 A	0,50 A	
IP / Insulation class	54 / F			
Acoustic pressure level*	47 dB(A)*	47 dB(A)*	47 dB(A)*	
	LEO FB 25 V	LEO FB 45 V	LEO FB 65 V	LEO FB 100 V
Maximum airflow	4400 m ³ /h	4100 m ³ /h	3900 m ³ /h	5200 m ³ /h
Power supply	230 V / 50 Hz			
Power consumption	320 W	320 W	320 W	450 W
Current consumption	1,4 A	1,4 A	1,4 A	2,0 A
IP / Insulation class	54 / F			
Acoustic pressure level*	54 dB(A)*	54 dB(A)*	54 dB(A)*	63 dB(A)*

* Acoustic pressure level measured in the room of average sound absorption, capacity 1500 m³, at distance of 5 m from the unit.












TECHNICAL DATA

	LEO FB 10 V	LEO FB 20 V	LEO FB 30 V	
Exchanger	Cu-Al, one-row	Cu-Al, two-row	Cu-Al, two-row	
Heating capacity**	10,1 kW	21,4 kW	27,3 kW	
Air temperature rise**	14,5°C	32,0°C	42,5°C	
Connection	½"			
Maximum working pressure	1,6 MPa			
Maximum temperature of heating water	120 °C			
	LEO FB 25 V	LEO FB 45 V	LEO FB 65 V	LEO FB 100 V
Exchanger	Cu-Al, one-row	Cu-Al, two-row	Cu-Al, three-row	Cu-Al, three-row
Heating capacity**	26,7 kW	45,0 kW	65,5 kW	94,1 kW
Air temperature rise**	18,0°C	32,5°C	50,0°C	53,5°C
Connection	¾"			
Maximum working pressure	1,6 MPa			
Maximum temperature of heating water	120 °C			
	LEO FB 10 V	LEO FB 20 V	LEO FB 30 V	
Weight	7,4 kg	8,3 kg	11,3 kg	
Weight (unit filled with water)	8,1 kg	9,5 kg	12,7 kg	
Air stream range***	14,5 m	14 m	13 m	
Casing	EPP (expanded polypropylene)			
Color	Graphite			
Working environment	Indoors			
Work position	Wall/ceiling			
	LEO FB 25 V	LEO FB 45 V	LEO FB 65 V	LEO FB 100 V
Weight	14,8 kg	16,0 kg	18,3 kg	26,3 kg
Weight (unit filled with water)	15,8 kg	18,0 kg	21,0 kg	30,4 kg
Air stream range***	26 m	24 m	22 m	23,0 m
Casing	EPP (expanded polypropylene)			
Color	Graphite			
Working environment	Indoors			
Work position	Wall/ceiling			

** Maximum air flow, water temperature 90/70, air inlet temperature 0 °C.

*** Range of isothermal horizontal stream, limit speed 0,5 m/s.

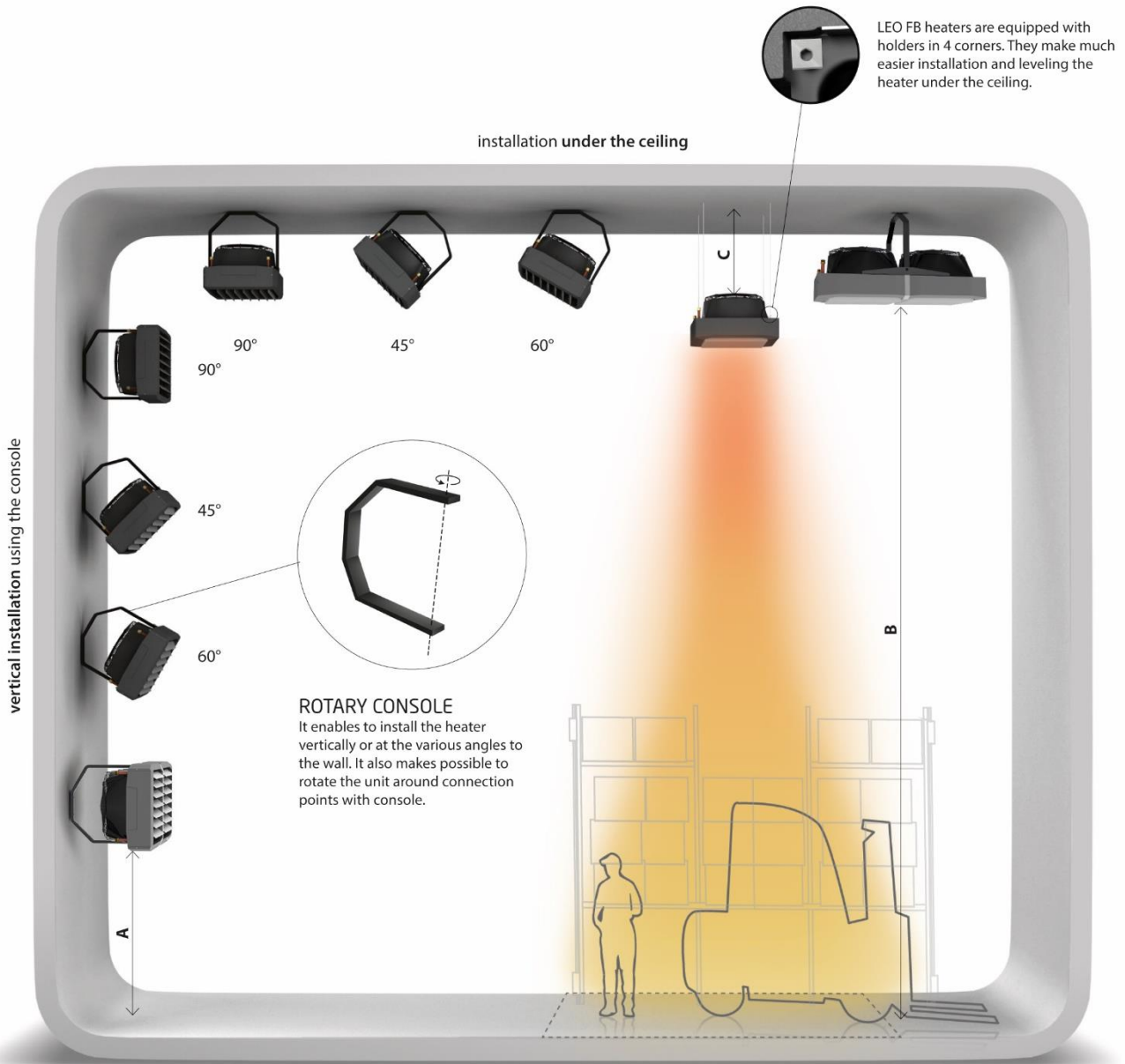
CONTROL EQUIPEMENT

LEO FB			V	LEO FB			V
T-box		Intelligent controller with touch screen	● with DRV V	TS		3-step regulator with room thermostat	●
PT-1000		External temperature sensor for T-box	● with DRV V	SRQ2d		1/2" two-way valve with actuator	●
DRV V		Control module for LEO V (option to work with T-box)	●	SRQ3d		1/2" three-way valve with actuator	●
HMI		Programmable controller	●	SRQ2d		3/4" two-way valve with actuator	●
NTC		External temperature sensor for HMI	●	SRQ3d		3/4" three-way valve with actuator	●
RX		RX splitter	●				

Detailed information concerning installation and electrical connections are available in the technical documentation of the device.

Special features	LEO FB
	Fan heater with AC fan, with possibility of 3-step air flow regulation.
	Specially designed 3D-console allowing parallel or at angle of 30 ° or 45 ° unit installation as well to wall as to ceiling.
	Lightweight casing made of EPP (expanded polypropylene) resistant to scratches and dirt.
	With T-box and HMI controllers, the unit adjusts the heating power to changing conditions in the room
	U-profiles for easy ceiling installation with pins (option).
	LEO FB is able to work in continuous and thermostatic mode.
	Specially profiled nozzle directing the air on the whole surface of the heat exchanger and reducing the noise generated during the flow.
	High airflow despite small unit dimensions.

INSTALLATION



	Dimension [m]		
	A	B	C
LEO FB 10	max. 3,0	2,5 – 5,0	min. 0,3
LEO FB 20	max. 3,0	2,5 – 5,0	
LEO FB 30	max. 3,0	2,5 – 5,0	
LEO FB 25	2,5 – 8,0	2,5 – 10,0	
LEO FB 45	2,5 – 8,0	2,5 – 10,0	
LEO FB 65	2,5 – 8,0	2,5 – 10,0	
LEO FB 100	2,5 – 8,0	2,5 – 10,0	

HEATING CAPACITY

Tp1	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C
Tw1/Tw2 = 90/70°C				Tw1/Tw2 = 80/60°C				Tw1/Tw2 = 70/50°C				Tw1/Tw2 = 60/40°C				Tw1/Tw2 = 50/40°C				
LEO FB 10				III (V = 2100m³/h)																
0	10,1	446	2,8	14,5	8,6	377	2,1	12,0	7,0	307	1,5	10,0	5,4	234	1,0	7,5	5,5	481	3,6	8,0
5	9,5	417	2,4	18,5	7,9	347	1,8	16,0	6,3	277	1,3	14,0	4,7	203	0,8	11,5	4,8	421	2,8	12,0
10	8,8	388	2,1	22,5	7,2	317	1,6	20,0	5,6	246	1,0	18,0	3,9	170	0,6	15,5	4,1	360	2,1	16,0
15	8,1	358	1,9	26,5	6,5	287	1,3	24,0	4,9	215	0,8	22,0	3,1	135	0,4	19,5	3,4	299	1,5	20,0
20	7,4	328	1,6	30,5	5,9	257	1,1	28,0	4,2	184	0,6	26,0	1,9	82	0,2	22,5	2,7	235	1,0	23,5
LEO FB 20				III (V = 2000m³/h)																
0	21,4	946	17,6	32,0	18,4	810	13,7	27,5	15,4	675	10,2	23,0	12,4	540	7,1	18,5	11,9	1033	23,2	17,5
5	20,1	887	15,7	34,5	17,1	751	12,0	30,0	14,0	615	8,6	26,0	11,0	479	5,6	21,0	10,5	913	18,6	20,5
10	18,7	827	13,8	37,5	15,7	691	10,3	33,0	12,7	555	7,2	28,5	9,6	418	4,5	24,0	9,1	792	14,4	23,5
15	17,4	768	12,0	40,5	14,3	631	8,7	36,0	11,3	494	5,8	31,5	8,2	356	3,4	27,0	7,7	670	10,7	26,5
20	16,0	708	10,5	43,5	13,0	570	7,3	39,0	9,9	433	4,6	34,5	6,7	293	2,4	30,0	6,3	547	7,5	29,0
LEO FB 30				III (V = 1900 m³/h)																
0	27,3	1202	14,3	42,5	23,3	1025	11,0	36,5	19,4	848	8,1	30,5	15,4	671	5,5	24,0	15,0	1308	18,7	23,5
5	25,5	1125	12,7	44,5	21,6	947	9,6	38,5	17,6	770	6,8	32,5	13,6	592	4,4	26,0	13,2	1152	14,8	25,5
10	23,7	1047	11,1	46,5	19,8	869	8,2	40,5	15,8	691	5,6	34,5	11,8	512	3,4	28,0	11,4	995	11,4	27,5
15	22,0	970	9,7	49,0	18,0	791	6,9	42,5	14,0	613	4,5	36,5	9,9	431	2,5	30,5	9,6	836	8,4	30,0
20	20,2	892	8,3	51,0	16,2	713	5,7	45,0	12,2	533	3,5	38,5	8,0	349	1,7	32,5	7,8	677	5,7	32,0
LEO FB 25				III (V = 4400m³/h)																
0	26,7	1179	11,6	18,0	22,7	999	8,8	15,5	18,7	819	6,3	12,5	14,6	637	4,2	10,0	14,7	1279	15,0	10,0
5	25,0	1101	10,2	22,0	21,0	921	7,6	19,0	16,9	741	5,3	16,5	12,8	558	3,3	13,5	12,9	1122	11,8	13,5
10	23,2	1024	8,9	25,0	19,2	843	6,5	23,0	15,1	662	4,3	20,0	11,0	478	2,5	17,5	11,1	963	9,0	17,5
15	21,4	946	7,7	29,5	17,4	765	5,4	26,5	13,3	583	3,4	24,0	9,1	396	1,8	21,0	9,2	804	6,5	21,0
20	19,7	868	6,6	33,0	15,6	686	4,5	30,5	11,5	502	2,6	27,5	7,2	312	1,2	24,5	7,4	642	4,3	25,0
LEO FB 45				III (V = 4100m³/h)																
0	45,0	1986	15,2	32,5	38,5	1693	11,7	27,5	32,0	1402	8,6	23,0	25,5	1110	5,9	18,5	24,9	2163	19,8	18,0
5	42,1	1958	13,4	35,5	35,6	1565	10,2	30,5	29,1	1273	7,2	26,0	22,5	980	4,7	21,0	21,9	1905	15,8	21,0
10	39,2	1730	11,8	38,0	32,7	1437	8,7	33,5	26,1	1144	6,0	29,0	19,5	849	3,6	24,0	18,9	1646	12,1	23,5
15	36,3	1603	10,3	41,0	29,8	1308	7,3	36,0	23,2	1014	4,8	31,5	16,5	717	2,7	27,0	15,9	1385	8,9	26,5
20	33,4	1475	8,8	43,5	26,8	1179	6,1	39,0	20,2	883	3,7	34,0	13,3	581	1,9	29,5	12,9	1122	6,1	29,0
LEO FB 65				III (V = 3900m³/h)																
0	65,5	2892	21,3	50,0	56,5	2481	16,6	43,0	47,3	2071	12,3	36,0	38,1	1659	8,6	29,0	36,1	3144	27,7	27,5
5	61,4	2712	18,9	51,5	52,3	2300	14,4	44,5	43,2	1889	10,4	37,5	33,8	1475	6,9	30,5	32,0	2781	22,1	29,0
10	57,4	2531	16,7	53,0	48,2	2128	12,4	46,5	39,0	1705	8,7	40,0	29,6	1289	5,5	32,3	27,8	2416	17,2	31,0
15	53,3	2351	14,6	55,0	44,1	1936	10,6	48,0	34,8	1521	7,1	41,0	25,2	1100	4,1	34,0	23,5	2048	12,8	32,5
20	49,2	2170	12,6	56,5	39,9	1754	8,8	50,0	30,5	1335	5,6	42,5	20,8	906	2,9	35,5	19,3	1676	8,9	34,5
LEO FB 100				III (V = 5200m³/h)																
0	94,1	4155	26,0	53,5	81,0	3560	20,2	46,0	67,9	2969	15,0	38,5	54,6	2379	10,4	31,0	52,2	4542	34,1	29,5
5	88,2	3890	23,0	55,0	75,0	3295	17,5	47,5	61,8	2704	12,6	40,0	48,5	2112	8,4	32,5	46,1	4011	27,2	31,0
10	82,2	3627	20,3	56,5	69,0	3031	15,1	49,0	55,7	2437	10,5	41,5	42,3	1843	6,6	34,0	40,0	3479	21,0	32,5
15	76,2	3364	17,7	58,0	63,0	2766	12,8	50,5	49,6	2170	8,5	43,0	36,1	1571	5,0	35,5	33,8	2944	15,6	34,0
20	70,3	3101	15,2	59,0	56,9	2501	10,6	52,0	43,5	1902	6,7	44,5	29,7	1296	3,5	36,5	27,6	2405	10,8	35,5

V – airflow PT – heat capacity Tp1 – inlet air temp. Tp2 – outlet air temp.

Tw1 – inlet water temp. Tw2 – outlet water temp. Qw – water flow rate Δpw – pressure drop of water