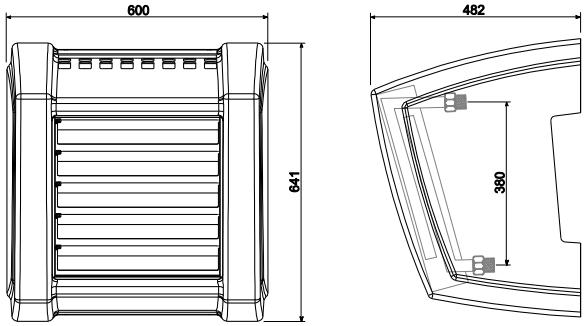
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SPECIFICATION SHEET OF FS S / LEO FS M

KK LEO FS 10.04. EN

MAIN DIMENSIONS



GENERAL INFORMATION

Main construction is an integrated mounting bracket, it can be mounted to the wall w/o additional components. M-type units has a power efficient axial fan with the electronically commutated (EC) motor. Casing made of ABS plastic, covers completely the heating and electrical installation. Inclined by 15° towards the room directs the heated air directly onto the zone of peoples residence. Units has a modern design and aesthetic finish of its blades - anodized aluminum. Due to modern look Leo FS heaters are fit for buildings of highest aesthetic demands like pubs, restaurants, small and medium size shops, exhibition areas etc.

TECHNICAL DATA

	LEO FS S	LEO FS M
Fan	Axial fan, single phase, AC.	Axial fan, electronically commutated (EC), single phase, AC
Maximum airflow	1750 m^3h	
Power supply	230 V / 50 Hz	
Current consumption	0,4 A	0,25 A
Power consumption	92 W	57,5 W
IP	54	
Insulation class	F	
Acoustic pressure level*	45 dB(A)	

	LEO FS
Exchanger	Copper-aluminium, two row.
Heating capacity**	19 kW
Air temperature rise (ΔT)**	31 °C
Max. temperature of heating water	95 °C
Max. water pressure	1,6 MPa
Connection	½”

	LEO FS
Casing	ABS plastic
Color	Gray
Weight	13,8 kg
Weight (unit filled with water)	15 kg
Working enviroment	Indoors.
Positioning	Vertically on the wall.
Air stream range***	12 m

Special features	LEO FS
Energy-saving fan with electronically commutated motor (EC).	
Casing covers completely the heating and electrical installation.	
Integrated mounting console	
Inclined by 15° towards the room directs the heated air directly onto the zone of residence.	
Air blades can be mounted either vertically or horizontally in those window.	
Available control based on modulated operation of the heater (M-Type). Airflow and heat capacity are automatically controlled depending on actual temperature.	

* Acoustic pressure level measured in the room of average sound absorption, capacity 1500m3, at distance of 5m from the unit.
** Maximum air flow, water temperature 90/70, 0 °C air inlet temperature inlet air
*** Range of isothermal horizontal stream, limit speed 0,5 m/s

HEATING CAPACITY OF LEO FS

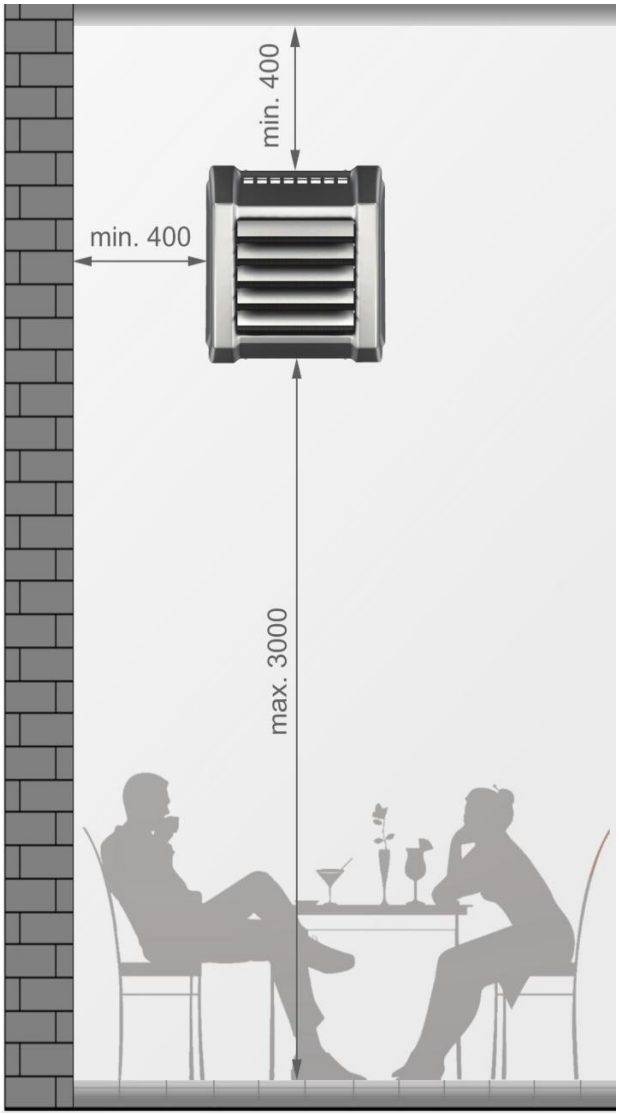
V = 1750 m³/h

Tw1/Tw2 = 90/70 °C				
Tp1	**PT**	**Qw**	**Δpw**	**Tp2**
°C	**kW**	**l/h**	**kPa**	**°C**
0	19,4	873	5,9	31,3
5	18,3	806	5,1	34,4
10	16,8	741	4,4	37,5
15	15,3	676	3,7	40,5
20	13,9	613	3,1	43,5
Tw1/Tw2 = 80/60 °C				
0	16,9	741	4,5	26,7
5	15,4	676	3,8	29,7
10	13,9	611	3,2	32,8
15	12,5	548	2,6	35,7
20	11,0	485	2,1	38,7
Tw1/Tw2 = 70/50 °C				
0	13,9	608	3,2	22,0
5	12,4	544	2,6	25,0
10	11,0	480	2,1	28,0
15	9,5	417	1,6	30,9
20	8,1	355	1,2	33,7

Tw1/Tw2 = 60/40 °C				
Tp1	**PT**	**Qw**	**Δpw**	**Tp2**
°C	**kW**	**l/h**	**kPa**	**°C**
0	10,9	473	2,1	17,2
5	9,4	409	1,6	20,1
10	7,9	345	1,2	23,0
15	6,4	280	0,8	25,7
20	4,8	210	0,5	28,1
Tw1/Tw2 = 50/40 °C				
0	10,9	945	7,6	17,2
5	9,4	820	5,9	20,2
10	8,0	696	4,4	23,1
15	6,6	573	3,1	26,0
20	5,2	452	2,0	28,8

V - airflow
PT - heat capacity
Tp1 - inlet air temperature
Tp2 - outlet air temperature
Tw1 - inlet water temperature
Tw2 - outlet water temperature
Qw - water flow rate
Δpw - water pressure drop

RECOMMENDED MOUNTING DISTANCE



AUTOMATIC ELEMENTS

		LEO FS	S	M
RA		Room thermostat	●	
RD		Room thermostat with a weekly programmer	●	
TR / TRd		1,5 A / 3 A five step fan speed regulator	●	
SRS		½" two-way valve with actuator	●	●
VNT20		fan speed controller with a built-in room thermostat		●
VNTLCD		Programmable fan speed controller with a built-in room thermostat		●
R10		Signal distributor		●
PT-1000 IP20		Wall-mounted temperature sensor IP20		●
PT-1000 IP65		Wall-mounted temperature sensor IP65		●

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