



FLOWAIR offers a wide range of products dedicated to work under harsh environmental conditions. Special FX Series may be used in such facilities as car washes, live-stock farms, greenhouses, industrial halls, food production and areas threatened by explosion, etc.

Heating capacity	26–45 kW
Air flow	3 800–4 300 m ³ /h
Weight	33,1–36,6 kg
Color	grey
Casing	sheet steel



AIR NOZZLE

Directs the blown air onto the whole surface of the exchanger.
It specially designed profile made from plastic, reduces noise generated during air flow.

FAN

The heater is equipped with an explosion-proof fan. The blade ends are made of plastic and the motor casing prevents sparking. The device can be applied in explosion-hazard zone Z1, in areas of explosion hazard caused by flammable gas, vapours and liquids of explosiveness group IIA and IIB with temperature classes T1,T2 and T3.

SELECTION

To maintain maximal safety applied automatic control system and electrical connections should also be manufactured as explosion-proof and in at least the same class as the fan.
Automatic control system should be selected individually depending on the level of explosion hazard in building.



LEO
EL



Heating capacity	13,5/27 kW
Air flow	4500 m ³ /h
Weight	46,3 kg
Color	grey
Casing	sheet steel



LEO
INOX



Heating capacity	10–65 kW
Air flow	900–4400 m ³ /h
Weight	18–24 kg
Color	—
Casing	stainless steel



HEATING RODS

Six finned heating rods for increased efficiency of the heat transfer have been assembled. Specially shaped and located inside the casing and designed for the best air flow and utilization of heating capacity.



CONTROL SYSTEM

Complete supply control and protection system with room thermostat. There are three operation modes available. Summer mode: The fan is running constantly without heating. Two winter modes: half (13,5 kW) and full (27 kW) heating capacity. Control system protects heating rods and fan against overheat.



CASING

The casing made of stainless steel provides resistance to corrosive factors. A specially designed air nozzle directs the air stream onto the whole surface of the heat exchanger, therefore reduces the air flow losses and ensures quiet operation.

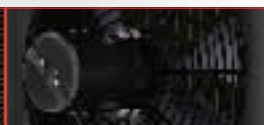
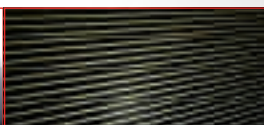
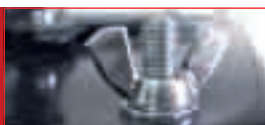


SELECTION

In order to select proper grade of Inox steel used for heater construction it is necessary to define precisely the working environment conditions: type of corrosive substances, pH, humidity, presence of organic compounds and substances, etc. The device should be cleaned on a regular basis to maintain its anti-corrosion properties.



Heating capacity	14–45 kW
Air flow	700–3700 m ³ /h
Weight	34,6–36,9 kg
Color	grey
Casing	steel



SPECIAL CASING INTERIOR

Specially profiled channel inside the casing – guiding air directly from the fan onto the heaters area and insulates the remaining space of the casing interior. It forces dirt to accumulate in an easy accessible area for cleaning (no tools required).

EPOXY-COATED EXCHANGER

Three row heat exchanger – large gap between the lamellas (4 mm) make cleaning with compressed air or pressurized water easier. Thicker lamellas used to avoid bending during cleaning. **EPOXY COATING – improved resistance to corrosive environments (e.g. extends resistance to ammonia).**

FAN

IP 66 insulation class. Plastic fan blades of increased thickness used for high abrasion and corrosion resistance. The fan was selected so that the growing resistance affects its operation as little as possible. Quick disassembly of the fan w/o any tools makes its cleaning easy.

EXPANDABLE MOUNTING BRACKETS

Make mounting on the wall easy. Thanks to their design offset from the wall is possible. This makes the access to its rear part very convenient, e.g. for cleaning.

DRAIN PLUG

It is situated at the bottom part of the heater casing. Water accumulated inside the unit during cleaning can be easily removed.





AIR HEATING AT FARM BUILDINGS

Dust in the air as well as great humidity and corrosive factors are present in live-stock facilities. LEO AGRO has been especially designed for such buildings. The heater contains many design solutions that increase its operational safety and prevent damage.

It is more resistant because of:

- durable casing design
- epoxy coated heat exchanger with thicker lamellas
- fan and motor fit to operate under heavy-duty conditions.

Easy cleaning:

- the dirt is accumulating inside specially designed casing, with easy access,
- wider distance between the exchanger lamellas
- IP66 insulation class of the motor (resistant to cleaning with water)
- simple disassembly of the fan board
- expandable mounting brackets
- drain plug

LEO
AGRO

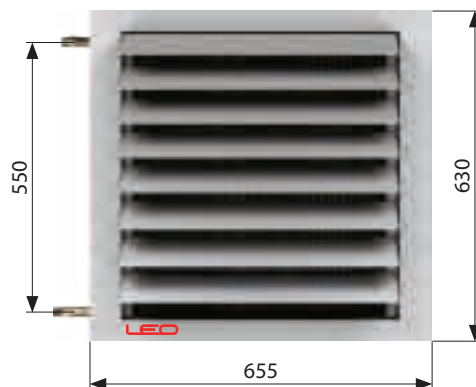
LEO INOX 25					LEO INOX 45				LEO INOX 65			
V = 4400 m ³ /h					V = 4100 m ³ /h				V = 3900 m ³ /h			
Tp1	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2	PT	Qw	Δpw	Tp2
°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C	kW	l/h	kPa	°C
Tw1/Tw2 = 90/70°C												
0	25,4	1121	11,7	16	46,8	2067	17,5	31,6	64,6	2660	36,8	46,1
5	23,5	1037	10,1	20	43,3	1911	15,2	34,7	60,2	2464	32	48,4
10	21,6	953	8,7	24,1	39,8	1758	13	37,8	55,4	2272	27,6	50,7
15	19,7	871	7,4	28,1	36,4	1607	11	40,9	50,1	2084	23,6	52,9
20	17,9	790	6,2	32,1	33,1	1459	9,2	43,9	46,2	1899	19,9	55,1
Tw1/Tw2 = 80/60°C												
0	21,6	950	8,9	13,6	40,1	1762	13,4	27,1	56,1	2288	28,7	39,8
5	19,7	867	7,5	17,6	36,6	1610	11,4	30,2	51,3	2097	24,5	42,1
10	17,9	785	6,3	21,6	33,2	1459	9,5	33,2	46,7	1909	20,7	44,3
15	16	704	5,1	25,6	29,9	1312	7,8	36,2	42,1	1725	17,2	46,5
20	14,2	624	4,1	29,6	26,5	1166	6,3	39,2	37,6	1543	14,1	48,6
Tw1/Tw2 = 70/50°C												
0	17,8	779	6,4	11,2	33,3	1459	9,8	22,5	47,1	1919	21,5	33,4
5	15,9	697	5,2	15,2	29,9	1309	8,1	25,6	42,5	1731	17,9	35,6
10	14,1	617	4,2	19,2	26,6	1162	6,5	28,6	37,9	1547	14,6	37,8
15	12,3	537	3,2	23,1	23,2	1017	5,1	31,5	33,4	1366	11,6	39,9
20	10,5	457	2,4	27	20	874	3,9	34,4	28,9	1187	9,1	42

	EX 25/45	EL	INOX 25/45/65	AGRO 45
Power supply	3x400V/50 Hz	3x400V / 50Hz	230 V/50 Hz	230 V/50 Hz
Max. power consumption	290W	27kW	280W	415W
Max. current consumption	0,88 A	39 A	1,2 A	1,8 A
IP/Insulation class	44/F	20/-	54/F	66/F
Acoustic pressure level	51 dB(A)	51 dB(A)	51 dB(A)	51 dB(A)

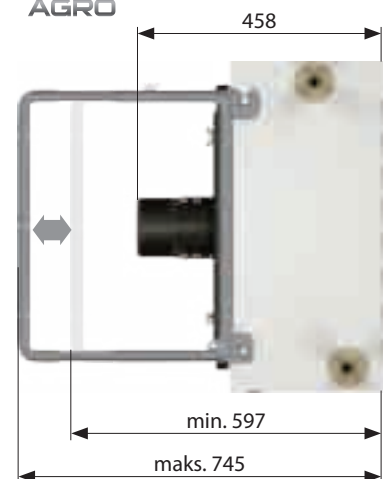
Acoustic pressure level measured in the room of average sound absorption, capacity 1500m³, at distance of 5m from the unit.

LEO INOX

Dimensions of Leo Inox and FB are the same PAGE 35



LEO AGRO



Connecting stub ¾"

LEO AGRO 45				LEO EX 25				LEO EX 45				
V = 3 700 m ³ /h				V = 4 300 m ³ /h				V = 3 800 m ³ /h				
Tp1	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
Tw1/Tw2 = 90/70°C												
0	44,9	1980	26,2	33,7	25,5	1090	7,6	17,4	44,9	1882	12,5	34,8
5	41,5	1830	22,8	36,7	23,7	1018	6,7	21,2	41,0	1738	11,0	36,5
10	38,3	1690	19,7	39,7	22	946	5,9	25	37,3	1630	9,7	39,1
15	35,0	1540	16,9	42,7	20,2	874	5,1	28,9	34,6	1476	8,3	41,9
20	31,9	1400	14,3	45,6	18,4	805	4,3	32,7	31,8	1368	7,1	44,7
Tw1/Tw2 = 80/60°C												
0	38,9	1710	20,9	29,1	21,7	946	5,9	15	37,2	1584	9,8	28,9
5	35,5	1560	17,9	32,1	20,0	874	5,1	18,7	34,4	1476	8,4	31,7
10	32,4	1420	15,2	35,1	18,2	802	4,4	22,5	31,5	1368	7,2	34,5
15	29,1	1280	12,7	38,1	16,5	730	3,7	26,3	28,6	1224	6,1	37,2
20	26,0	1140	10,4	40,9	14,8	658	3	30	25,7	1116	5	40
Tw1/Tw2 = 70/50°C												
0	32,8	1440	16,0	24,6	18	802	4,4	12,4	31,2	1340	7,4	24,2
5	29,6	1290	13,3	27,6	16,3	694	3,7	16,2	28,4	1225	6,3	27,0
10	26,4	1150	10,9	30,5	14,5	622	3	20	25,5	1080	5,2	29,8
15	23,3	1020	8,8	33,4	12,8	550	2,4	23,8	22,6	975	4,2	32,5
20	20,2	890	6,9	36,3	11,1	478	1,9	27,6	19,7	865	3,3	35,3



Max. water temperature	130°C
Max. water pressure	1,6 MPa

Technical data concerning supplying with other water parameters are available upon request at Sales office.

- V – air flow
- PT – heating capacity
- Tp1 – inlet air temperature
- Tp2 – outlet air temperature

- Tw1 – inlet water temperature
- Tw2 – outlet water temperature
- Qw – heating water stream
- Δpw – water pressure drop

LEO FX

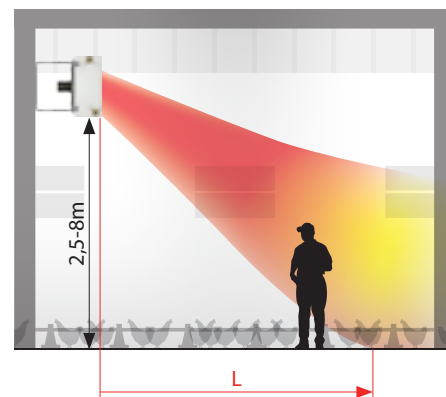
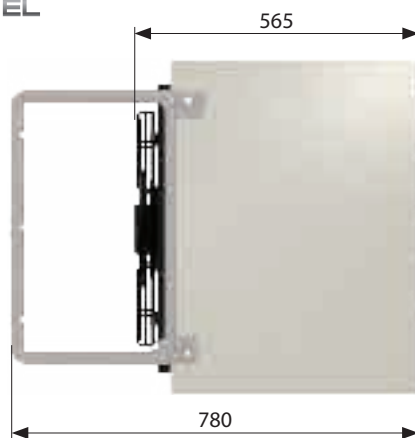
Weight [kg]	EX 25	EX 45	EL	INOX 25	INOX 45	INOX 65	AGRO 45
Unit	33,1	34,5	46,3	18	19,4	21,3	34,6
Unit filled with water	34,2	36,6	–	19	21,4	24	36,9
Air stream range [m]	EX 25	EX 45	EL	INOX 25	INOX 45	INOX 65	AGRO 45
L*	24	22	23	26	24	22	22

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

LEO
EX



LEO
EL



Connecting stub 3/4"