FLOWAIR
intelligent air flow

ELiS AX

Modern air curtains

HP ready

The new ELiS AX air curtain

Range
up to 4,5 m

Air flow
up to 6100 m³/h

Fan
Highly-efficient EC

Heating capacity
up to 81 kW

Acoustic pressure level
up to 65,0 dB(A)*

Housing
powder coated steel

What is ELiS AX?

The ELiS AX air curtain effectively isolates the room from such external factors as cold, heat, exhaust gas, dust and insects, by creating an air barrier between the inside and outside of the building. It is a technologically advanced air curtain, in line with the latest industry trends. This is evident in both the construction of the device and smart automation solutions.

Device types available

- 4 lengths: 1 m, 1.5 m, 2 m, 2.5 m
- 2 versions: air curtain with a 3-row water heat exchanger (3R) and curtain with a 4-row water heat exchanger (4R)
- range: AX36 – maximum range 3.6 m and AX45 – maximum range 4.5 m

*acoustic pressure level is given for a 1500 m³ room with an average sound absorption capacity, at a distance of 5 m from the device

Application

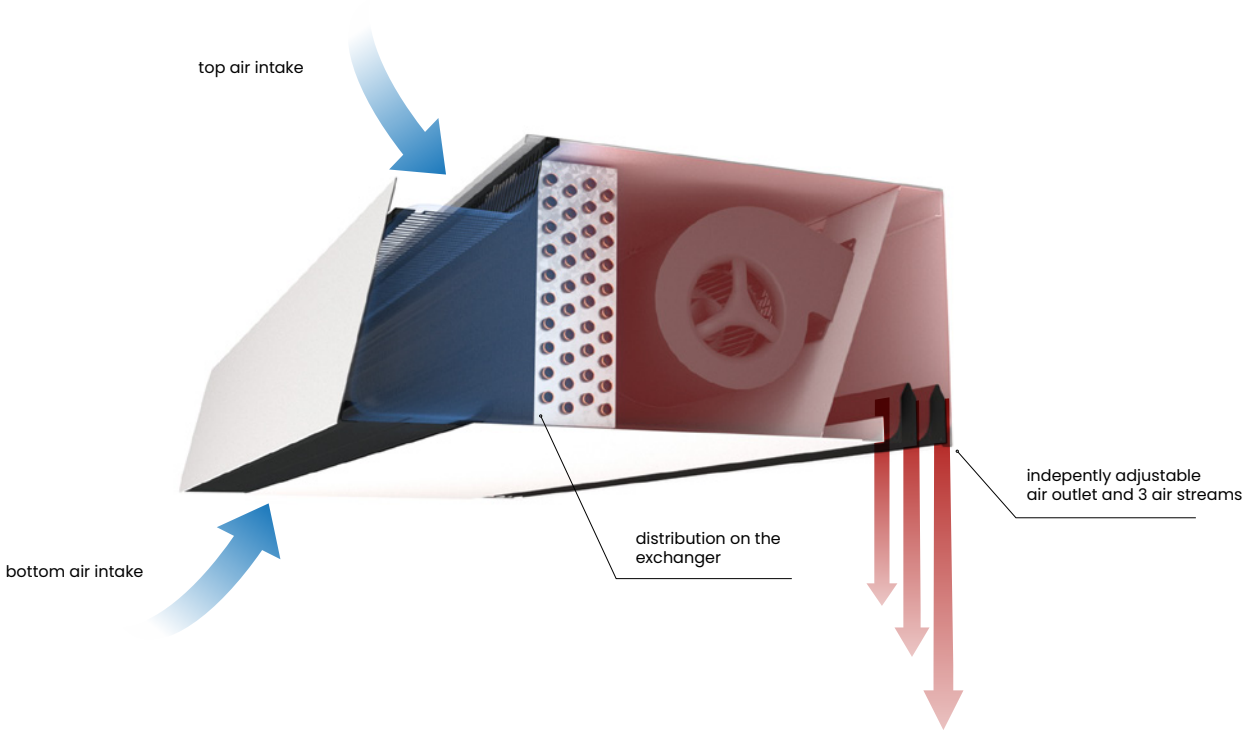
The AX air curtains are used both in commercial buildings and in smaller industrial buildings, such as:

- shopping malls
- shops
- restaurants
- car showrooms
- public-use facilities
- small-scale production floors and warehouses

ELiS AX
device features

OPTIflow technology

The OPTIflow technology involves directing the air flowing through the curtain in the right way, thus creating an even more effective air barrier during draughts in commercial buildings. Three outlet air streams create a highly efficient barrier against external factors, such as hot and cold air, dust and airborne contaminants. Even and matched airflow throughout the entire exchanger ensures a comfortable temperature and reduced energy consumption



OPTIsmart technology

This technology involves advanced smart automation, which enables precise temperature adjustment. It changes the mode of operation depending on external conditions. It adjusts the air flow of the air curtain depending on the difference in temperatures and intelligently adapts the operating time of the device depending on how often the door is opened.

Air filter

The ELiS AX air curtain can be used in buildings which require installation of devices equipped with a replaceable air filter. It is equipped with a replaceable ISO Coarse 30% filter which improves the air quality, and the device is protected against the ingress of dirt and other contaminants.

EC fan

The device is equipped with silent and energy-efficient EC fans, which enable smooth adjustment of the curtain's air flow.

Technical data, accessories and installation of devices

	ELiS AX36-W3R-100	ELiS AX36-W3R-150	ELiS AX36-W3R-200	ELiS AX36-W3R-250	ELiS AX36-W4R-100	ELiS AX36-W4R-150	ELiS AX36-W4R-200	ELiS AX36-W4R-250
Power supply [V/Hz]	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Max. power consumption [kW]	0,27	0,40	0,67	0,81	0,27	0,40	0,67	0,81
Max. current consumption [A]	2,3	3,3	5,6	6,4	2,2	3,2	5,5	6,3
IP	21	21	21	21	21	21	21	21
Connection ["]	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Air flow(1) [m³/h]	900 - 1800	1200-2700	2000-4300	2300-5300	800-1700	1100-2600	1900-4200	2200-5200
Acoustic pressure level(2) [dB(A)]	42-60	43-61	45-63	46-64	41-59	42-60	44-62	45-63
Acoustic power level(3) [dB(A)]	58-76	59-77	61-79	62-80	57-75	58-76	60-78	61-79
Heating capacity(4) [kW]	8,1-12,9	11,8-20,5	17,1-29,0	21,4-38,0	8,7-15,2	12,7-24,1	20,6-36,7	24,7-46,6
Max. temperature of heating water [°C]	60	60	60	60	60	60	60	60
Max. operating pressure [MPa]	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6
Max. temperature of operation [°C]	50	50	50	50	50	50	50	50
Temperature rise(4) (ΔT) [°C]	26-21	29-22	25-20	27-21	32-26	34-27	31-26	33-26
Device weight [kg]	38,5	53,3	71,7	86,8	40,0	55,6	74,8	90,3
Range(1) [m]	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6
	ELiS AX45-W3R-100	**ELiS AX45-W3R-150**	**ELiS AX45-W3R-200**	**ELiS AX45-W3R-250**	**ELiS AX45-W4R-100**	**ELiS AX45-W4R-150**	**ELiS AX45-W4R-200**	**ELiS AX45-W4R-250**
Power supply [V/Hz]	230/50	230/50	230/50	230/50	230/50	230/50	230/50	230/50
Max. power consumption [kW]	0,49	0,65	0,99	1,15	0,49	0,65	0,99	1,15
Max. current consumption [A]	3,3	4,6	6,4	7,6	3,2	4,5	6,3	7,5
IP	21	21	21	21	21	21	21	21
Connection ["]	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Air flow(1) [m³/h]	1100-2500	1500-3500	2200-5000	2400-6100	1000-2400	1400-3400	2100-4900	2300-6000
Acoustic pressure level(2) [dB(A)]	43-61	44-62	45-64	46-65	42-60	43-61	44-63	45-64
Acoustic power level(3) [dB(A)]	59-77	60-78	61-80	62-81	58-76	59-77	60-79	61-80
Heating capacity(4) [kW]	9,3-15,7	13,9-24,1	18,4-31,8	22,1-41,4	10,3-19,1	15,3-28,9	22,2-40,6	25,6-51,3
Max. temperature of heating water [°C]	60	60	60	60	60	60	60	60
Max. operating pressure [MPa]	1,6	1,6	1,6	1,6	1,6	1,6	1,6	1,6
Max. temperature of operation [°C]	50	50	50	50	50	50	50	50
Temperature rise(4) (ΔT) [°C]	25-18	27-20	24-19	27-20	30-23	32-25	31-24	33-25
Device weight [kg]	40,8	55,5	73,7	88,8	42,3	57,8	76,8	92,3
Range(1) [m]	4,5	4,5	4,5	4,5	4,5	4,5	4,5	4,5

(1) In accordance with ISO 27327-1, air flow is given for fan speeds between 25% and 100%.

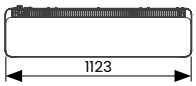
(2) Acoustic pressure level is given for a 1500 m³ room with an average sound absorption capacity, directivity factor Q=2, at a distance of 5 m from the curtain

(3) In accordance with ISO 27327-2, acoustic power level is given for fan speeds between 25% and 100%

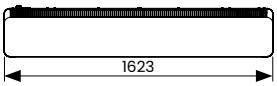
(4) The range of powers and temperatures is given for the following parameters: fan speed 25%, temperature of the heating medium 60/40°C, temperature of air at the inlet to the device 18°C – fan speed 100%, temperature of the heating medium 60/40°C, temperature of air at the inlet to the device 18°C.

Dimensions ELiS AX

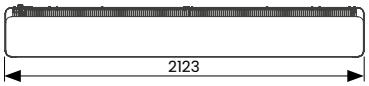
CAD drawings, Revit files and other documents for all models are available at www.flowair.com



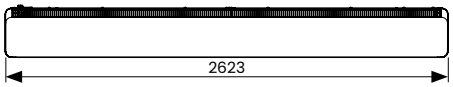
ELiS AX W-100



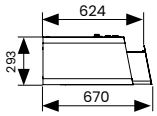
ELiS AX W-150



ELiS AX W-200



ELiS AX W-250



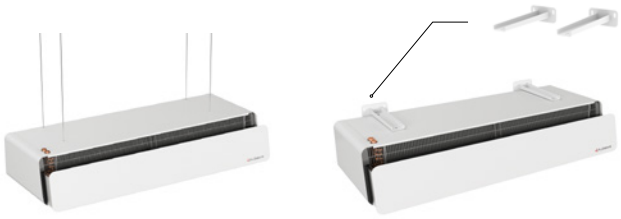
Installation accessories

Installation brackets enable vertical mounting

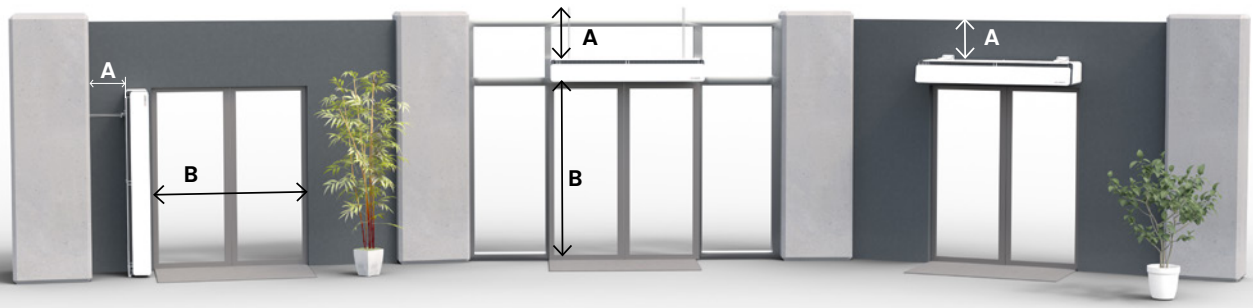
Brackets for vertical mounting. Air curtains may not be mounted vertically on top of each other. Available in white.

Consoles and threaded rods enable horizontal mounting

Consoles enable horizontal mounting (air curtains with a length of up to 2 m are mounted using two consoles, while curtains with a length of 2.5 m are mounted using three consoles). Available in white.



Installation of the ELiS AX air curtain



A – min. 10 cm

B – max. 3,6 m (ELiS AX36), max. 4,5 m (ELiS AX45)

Regulation using the T-box ZONE controller

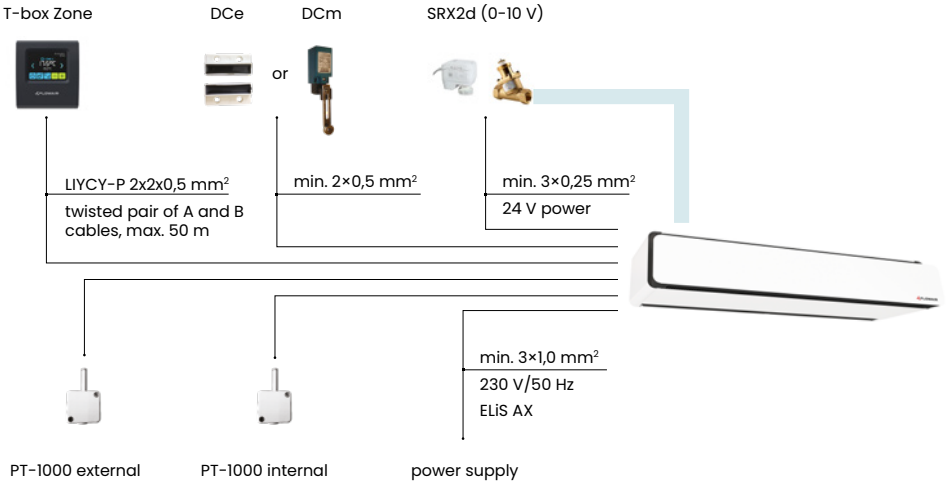
The ELiS AX air curtains have a built-in power and control automation system (DRV ELiS EC module), which makes it possible to:

- connect the device to a T-box Zone smart controller with a touch display,
- connect the device to a smart BMS.

Managing the curtain's operation using the T-box Zone controller makes it possible to:

- select the mode of operation in the scope of heating/ventilation (WINTER/SUMMER mode),
- select the SMART function (automatic adjustment of the curtain's operation in line with external and internal environmental conditions),
- enable automatic regulation of the curtain's air flow depending on external and internal conditions,
- set the device to operate in line with signal sent by a door sensor and with temperature, or only with data sent by a door sensor, or only with temperature,
- set the delay for the air curtain shut-off (heating signal and fans),
- set the heating mode of the water exchanger when the curtain is not operating,
- set the temperature of the medium at the return from the heat exchanger,
- set the temperature of the air flowing out of the air curtain,
- set the device to operate in accordance with a calendar.

Connection diagrams T-box Zone regulation for the ELiS AX air curtain

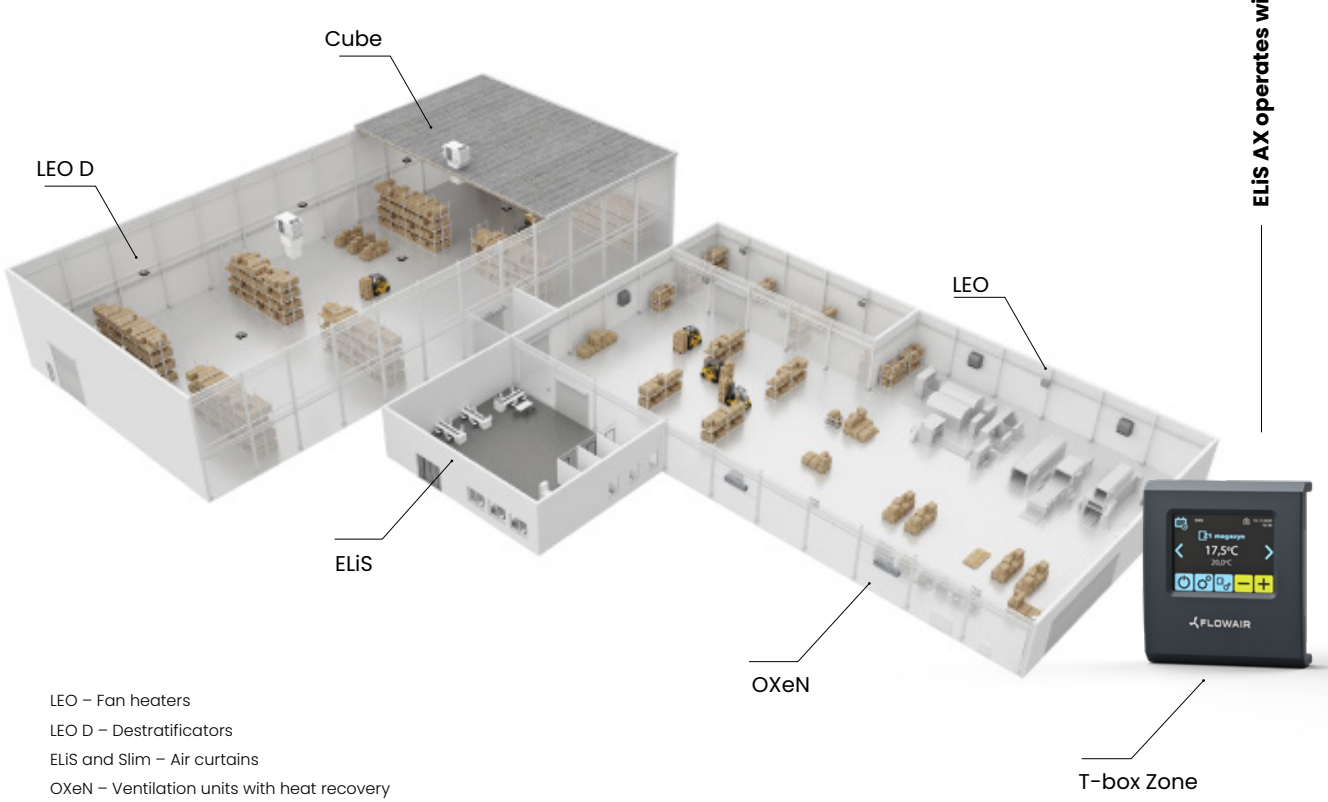


- T-Box Zone – smart controller with a touch display and a zonation function
- DCe – magnetic door sensor
- DCm – mechanical door sensor
- SRX2d – two-way balancing and control valve with a 0–10 V actuator
- PT-1000 – temperature sensor

SYSTEM FLOWAIR

The SYSTEM FLOWAIR is a complete range of heating and ventilation devices integrated by a single controller. The T-box Zone controller allows up to 31 devices from the range to work together in 31 independent zones.

ELiS AX operates within the SYSTEM



LEO – Fan heaters
LEO D – Destratificators
ELiS and Slim – Air curtains
OXeN – Ventilation units with heat recovery
Cube – Rooftop devices

Control of device operation

Local adjustment of device operation

Advanced control of ventilation and heating devices

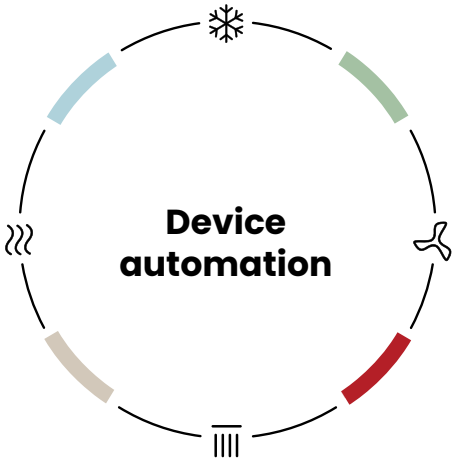
Adjustment of device operation schedule to individual needs

Antifreeze – protection of the building and equipment against excessively low temperatures

Integration and interoperability of devices

The T-box Zone smart touch controller has a number functions necessary to effectively manage the operation of the heating and ventilation system that until now were restricted to extensive Building Management Systems (BMS).

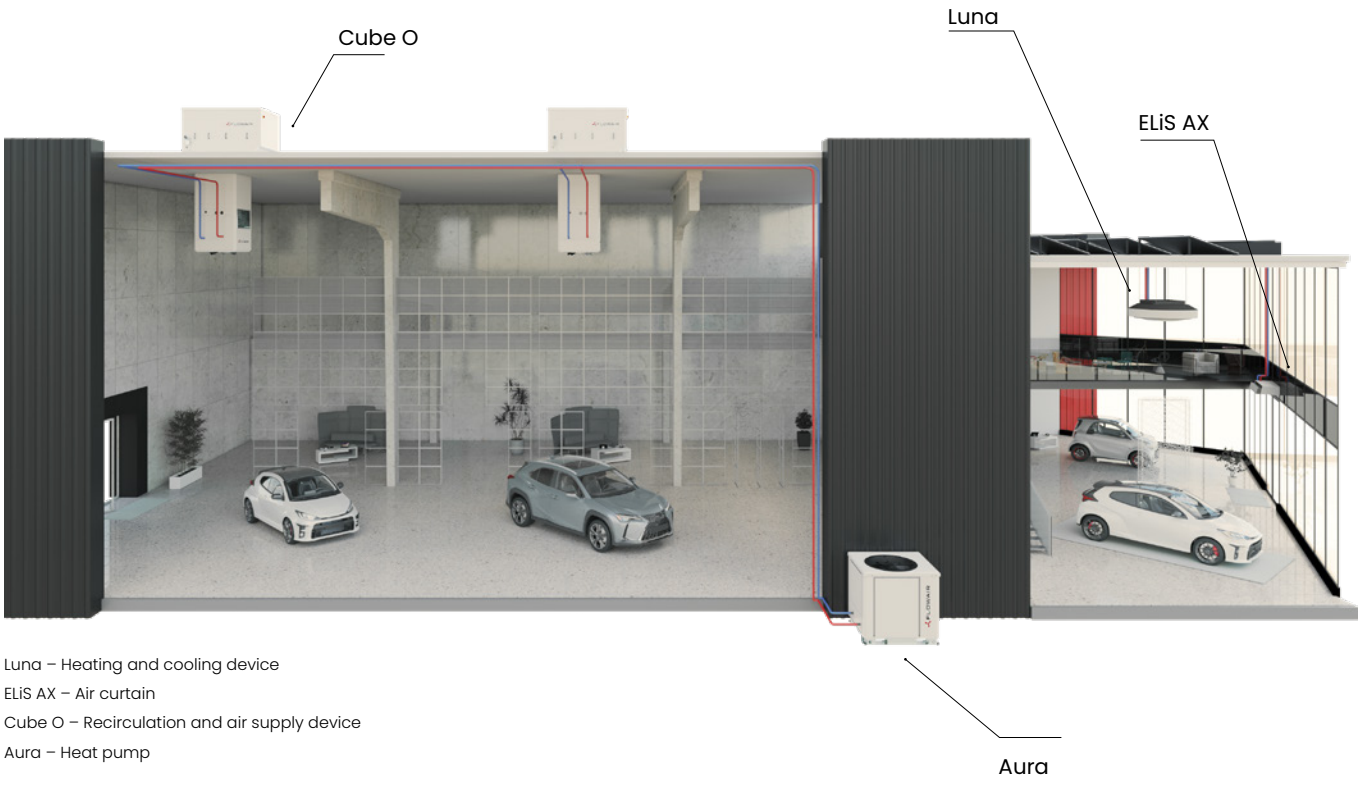
The SYSTEM enables devices to work together to ensure a higher thermal comfort and improve energy efficiency. The combined operation of heaters and destratificators makes it possible to effectively utilise heat from the upper parts of the room, while saving the heat energy supplied by the heaters.



Interoperability with heat pumps

The ELiS AX air curtain is an energy efficient solution, in line with the green trends and the zero-emission policy. It is equipped with a 3- or 4-row water heat exchanger, which works together with low-temperature heat sources. It can be supplied with a low-temperature heating medium (60–40°C).

Advanced control ensures service-free interoperability with Aura heat pumps from the FLOWAIR range. Another advantage of the solution is that it uses water as the heating or cooling medium, which increases safety and decreases the impact on the environment compared to air conditioning systems which use CFCs.



Luna – Heating and cooling device
ELiS AX – Air curtain
Cube O – Recirculation and air supply device
Aura – Heat pump

Tables of heating capacities of ELiS AX

Tw1/Tw2 = 60/40°C					Tw1/Tw2 = 50/40°C					Tw1/Tw2 = 45/35°C					Tw1/Tw2 = 40/30°C				
Tp1	**PT**	**Qw**	**Δpw**	**Tp2**	**Tp1**	**PT**	**Qw**	**Δpw**	**Tp2**	**Tp1**	**PT**	**Qw**	**Δpw**	**Tp2**	**Tp1**	**PT**	**Qw**	**Δpw**	**Tp2**
˚C	kW	l/h	kPa	˚C	˚C	kW	l/h	kPa	˚C	˚C	kW	l/h	kPa	˚C	˚C	kW	l/h	kPa	˚C
ELiS AX36-W3R-100																			
Air flow: 100%, V = 1800 m³/h																			
0,0	21,0	915	8,7	34,0	0,0	19,2	1675	26,9	31,5	0,0	17,0	1474	21,7	27,5	0,0	14,7	1273	16,8	24,0
10,0	16,5	721	5,6	37,0	10,0	14,9	1295	16,8	34,0	10,0	12,6	1095	12,6	30,5	10,0	10,3	893	8,8	26,5
20,0	11,9	520	3,1	39,5	20,0	10,4	909	8,8	37,0	20,0	8,1	706	5,6	33,0	20,0	5,7	497	3,0	29,5
ELiS AX36-W3R-150																			
Air flow: 100%, V = 2700 m³/h																			
0,0	32,8	1432	25,1	35,5	0,0	29,7	2583	75,0	32,0	0,0	26,2	2281	60,8	28,5	0,0	22,8	1980	47,8	24,5
10,0	26,1	1137	16,5	38,0	10,0	23,1	2008	47,3	35,0	10,0	19,7	1708	35,8	31,5	10,0	16,2	1406	25,6	27,5
20,0	19,1	835	9,4	40,5	20,0	16,4	1424	25,3	37,5	20,0	12,9	1121	16,6	34,0	20,0	9,4	812	9,4	30
ELiS AX36-W3R-200																			
Air flow: 100%, V = 4300 m³/h																			
0,0	49	2136	3,8	33,5	0,0	45,7	3983	12,4	31,0	0,0	40,1	3489	9,8	27,5	0,0	34,5	2992	7,5	23,5
10,0	38	1659	2,4	36,0	10,0	35,1	3059	7,6	34,0	10,0	29,5	2565	5,5	30,0	10,0	23,8	2061	3,7	26,0
20,0	26,7	1163	1,2	38,0	20,0	24,3	2116	3,8	36,5	20,0	18,5	1611	2,3	32,5	20,0	12,3	1070	1,1	28,5
ELiS AX36-W3R-250																			
Air flow: 100%, V = 5300 m³/h																			
0,0	62,6	2732	6,8	34,5	0,0	57,7	5026	21,5	32,0	0,0	50,8	4417	17,2	28,0	0,0	43,9	3806	13,2	24,0
10,0	49,1	2142	4,3	37,0	10,0	44,5	3877	13,3	34,5	10,0	37,6	3270	9,8	31,0	10,0	30,6	2655	6,8	27,0
20,0	35,1	1532	2,3	39,5	20,0	31,1	2709	6,8	37,0	20,0	24,1	2093	4,3	33,5	20,0	16,7	1450	2,2	29
ELiS AX36-W4R-100																			
Air flow: 100%, V = 1700 m³/h																			
0,0	24,1	1051	14,2	41,5	0,0	21,6	1884	41,9	37,0	0,0	19,2	1666	34,1	33,0	0,0	16,7	1448	26,9	28,5
10,0	19,2	836	9,4	43,0	10,0	16,8	1466	26,5	39,0	10,0	14,4	1249	20,2	34,5	10,0	11,9	1031	14,5	30,5
20,0	14,1	616	5,4	44,5	20,0	12,0	1044	14,3	40,5	20,0	9,5	824	9,5	36,5	20,0	6,9	597	5,4	32
ELiS AX36-W4R-150																			
Air flow: 100%, V = 2600 m³/h																			
0,0	37,8	1648	41,2	42,5	0,0	33,6	2926	119,1	38,0	0,0	29,8	2594	97,4	33,5	0,0	26,1	2262	77,5	29,5
10,0	30,2	1319	27,5	44,0	10,0	26,2	2285	76	39,5	10,0	22,5	1955	58,3	35,5	10,0	18,7	1623	42,4	31,0
20,0	22,6	984	16,2	45,5	20,0	18,8	1638	41,5	41,0	20,0	15,0	1304	28,0	37,0	20,0	11,1	963	16,5	32,5
ELiS AX36-W4R-200																			
Air flow: 100%, V = 4200 m³/h																			
0,0	58,4	2546	20	40,5	0,0	52,5	4569	60,1	36,5	0,0	46,5	4039	48,5	32,5	0,0	40,5	3510	38,0	28,0
10,0	46,4	2024	13,1	42,5	10,0	40,8	3554	37,7	38,5	10,0	34,8	3027	28,4	34,5	10,0	28,8	2497	20,2	30,0
20,0	34,2	1491	7,4	44,0	20,0	29,0	2528	20,1	40,0	20,0	22,9	1994	13,1	36,0	20,0	16,7	1446	7,4	31,5
ELiS AX36-W4R-250																			
Air flow: 100%, V = 5200 m³/h																			
0,0	73,6	3211	35	41,5	0,0	65,8	5728	103,7	37,0	0,0	58,3	5072	84,1	33,0	0,0	50,9	4416	66,2	28,5
10,0	58,7	2562	23,1	43,0	10,0	51,3	4465	65,4	39,0	10,0	43,9	3813	49,6	34,5	10,0	36,4	3157	35,7	30,5
20,0	43,6	1901	13,3	44,5	20,0	36,6	3190	35,2	40,5	20,0	29,1	2530	23,3	36,5	20,0	21,4	1855	13,4	32

Tw1/Tw2 = 60/40°C					Tw1/Tw2 = 50/40°C					Tw1/Tw2 = 45/35°C					Tw1/Tw2 = 40/30°C				
Tp1	**PT**	**Qw**	**Δpw**	**Tp2**	**Tp1**	**PT**	**Qw**	**Δpw**	**Tp2**	**Tp1**	**PT**	**Qw**	**Δpw**	**Tp2**	**Tp1**	**PT**	**Qw**	**Δpw**	**Tp2**
˚C	kW	l/h	kPa	˚C	˚C	kW	l/h	kPa	˚C	˚C	kW	l/h	kPa	˚C	˚C	kW	l/h	kPa	˚C
ELiS AX45-W3R-100																			
Wydajność: 100%, V = 2500 m³/h																			
0,0	25,7	1123	12,7	30,0	0,0	23,8	2068	39,7	28,0	0,0	20,9	1818	31,8	24,5	0,0	18,1	1569	24,7	21,0
10,0	20,2	883	8,2	33,5	10,0	18,4	1598	24,7	31,5	10,0	15,5	1348	18,4	28,0	10,0	12,6	1097	12,8	25,0
20,0	14,5	635	4,5	37,0	20,0	12,8	1117	12,8	35,0	20,0	10,0	865	8,2	31,5	20,0	7,0	608	4,4	28,0
ELiS AX45-W3R-150																			
Wydajność: 100%, V = 3500 m³/h																			
0,0	38,7	1688	33,9	32,5	0,0	35,1	3060	102,2	29,5	0,0	31,1	2701	82,8	26,0	0,0	27,0	2342	65,0	22,5
10,0	30,7	1339	22,2	35,5	10,0	27,3	2377	64,4	33,0	10,0	23,2	2019	48,6	29,5	10,0	19,1	1659	34,6	26,0
20,0	22,5	980	12,6	39,0	20,0	19,3	1680	34,2	36,0	20,0	15,2	1320	22,4	32,5	20,0	11,0	953	12,6	29,0
ELiS AX45-W3R-200																			
Wydajność: 100%, V = 5000 m³/h																			
0,0	53,8	2349	4,6	31,5	0,0	50,5	4394	14,9	29,5	0,0	44,3	3847	11,8	26,0	0,0	38,0	3297	9,0	22,0
10,0	41,8	1823	2,8	34,5	10,0	38,7	3371	9,1	32,5	10,0	32,5	2824	6,6	29,0	10,0	26,1	2267	4,5	25,5
20,0	29,3	1278	1,5	37,0	20,0	26,7	2328	4,5	35,5	20,0	20,4	1770	2,8	32,0	20,0	13,6	1180	1,3	28,0
ELiS AX45-W3R-250																			
Wydajność: 100%, V = 6100 m³/h																			
0,0	68,5	2987	8,1	33,0	0,0	63,3	5512	25,6	30,5	0,0	55,7	4841	20,4	26,5	0,0	48,1	4169	15,6	23,0
10,0	53,8	2339	5,1	35,5	10,0	48,8	4249	15,7	33,5	10,0	41,2	3582	11,6	30,0	10,0	33,5	2905	8,0	26,0
20,0	38,3	1672	2,7	38,5	20,0	34,0	2965	8,1	36,5	20,0	26,3	2287	5,1	32,5	20,0	18,3	1584	2,6	29,0
ELiS AX45-W4R-100																			
Wydajność: 100%, V = 2400 m³/h																			
0,0	30,6	1334	21,9	37,5	0,0	27,7	2408	65,7	33,5	0,0	24,5	2126	53,2	30,0	0,0	21,3	1844	41,8	26,0
10,0	24,2	1057	14,4	39,5	10,0	21,5	1870	41,4	36,0	10,0	18,3	1590	31,3	32,5	10,0	15,1	1307	22,3	28,5
20,0	17,8	775	8,2	41,5	20,0	15,2	1325	22,1	38,5	20,0	12,0	1041	14,5	34,5	20,0	8,7	751	8,1	30,5
ELiS AX45-W4R-150																			
Wydajność: 100%, V = 3400 m³/h																			
0,0	45,6	1989	58	39,0	0,0	40,8	3551	169,5	35,0	0,0	36,2	3144	138,3	31,0	0,0	31,6	2738	109,6	27,0
10,0	36,4	1588	38,5	41,5	10,0	31,8	2769	107,7	37,5	10,0	27,2	2365	82,4	33,5	10,0	22,6	1959	59,7	29,5
20,0	27,0	1178	22,4	43,0	20,0	22,7	1977	58,4	39,5	20,0	18,1	1569	39,1	35,5	20,0	13,3	1154	22,8	31,5
ELiS AX45-W4R-200																			
Wydajność: 100%, V = 4900 m³/h																			
0,0	64,9	2832	24,4	39,0	0,0	58,6	5099	73,7	35,0	0,0	51,8	4505	59,4	31,0	0,0	45,1	3911	46,4	27,0
10,0	51,5	2248	15,9	41,0	10,0	45,5	3963	46,1	37,0	10,0	38,8	3372	34,7	33,0	10,0	32,0	2777	24,6	29,0
20,0	37,9	1651	9,0	42,5	20,0	32,3	2812	24,4	39,5	20,0	25,5	2215	15,9	35,0	20,0	18,5	1603	8,9	31,0
ELiS AX45-W4R-250																			
Wydajność: 100%, V = 6000 m³/h																			
0,0	81,3	3547	42,1	39,5	0,0	72,9	6348	125,4	35,5	0,0	64,6	5616	101,5	31,5	0,0	56,3	4886	79,8	27,5
10,0	64,8	2826	27,7	41,5	10,0	56,8	4944	79	37,5	10,0	48,5	4217	59,8	33,5	10,0	40,2	3488	42,8	29,5
20,0	47,9	2091	15,9	43,5	20,0	40,5	3524	42,3	39,5	20,0	32,1	2790	27,9	35,5	20,0	23,5	2041	16,0	31,5

V – Air flow
PT – Heat capacity
Tp1 – Air temperature at the inlet to the device
Tp2 – Air temperature at the outlet of the device
Tw1 – Heating medium temperature at the inlet to the heat exchanger
Tw2 – Heating medium temperature at the return from the heat exchanger
Qw – Heating medium flow rate in the heat exchanger
Δpw – Pressure drop in the heat exchanger

FLOWAIR
intelligent air flow

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